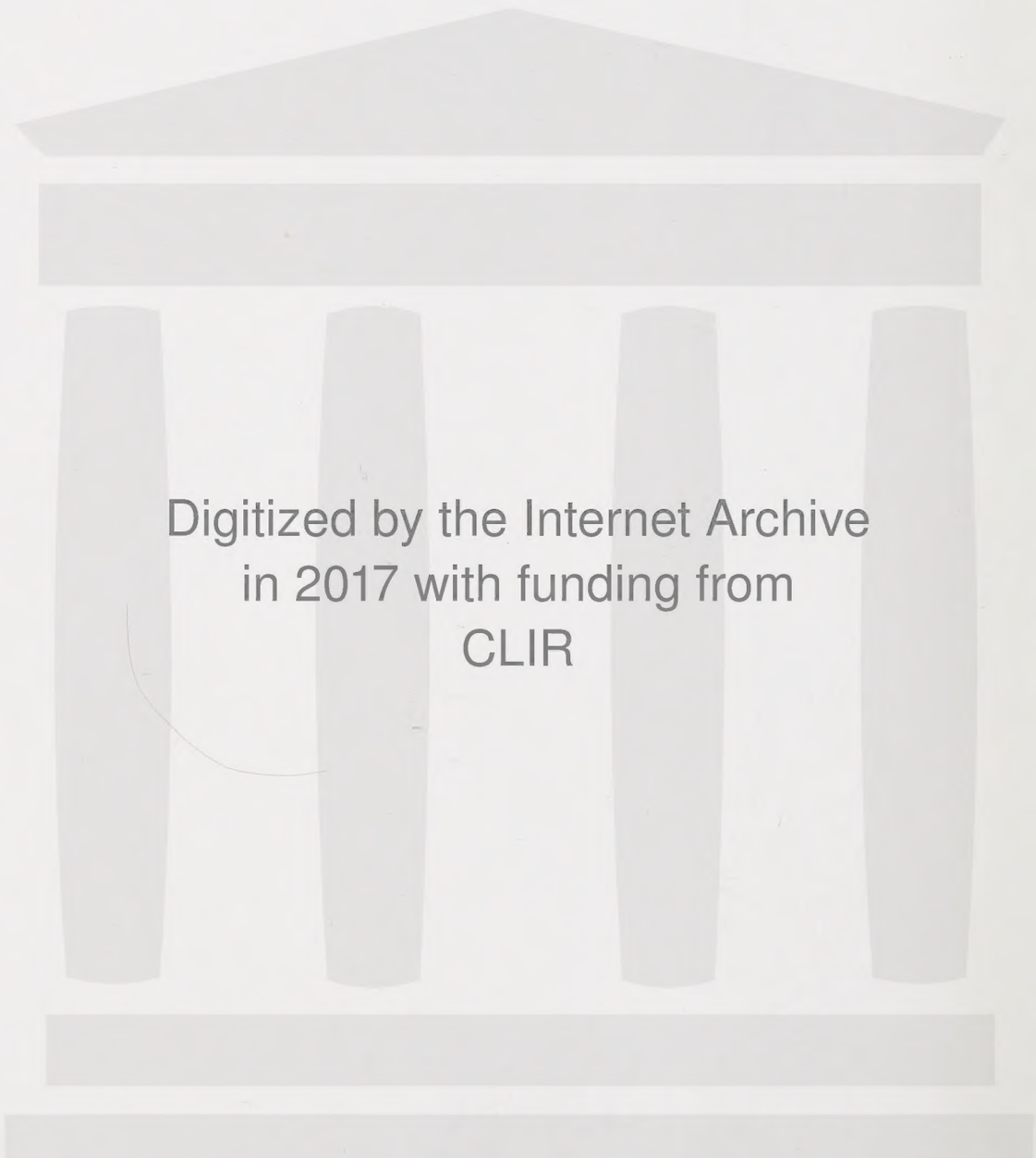
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W.D. Koenig

1979

Hastings Reservation

Melanerpes formicivorus

1979 Walter D. Koenig

## Melanerpes formicivorus

Hastings Reservation, Monterey Co., Calif.

15 February 1300. Walked up along Robertson Creek, checking for birds, especially where the pair had lived a couple of winters ago. I didn't see anyone, but an alarm call given in response to a Cooper's Hawk sounded identical to that of a Wickerbill. So there may actually be someone up here.

16 February Today Pam and I walked over to Corral Viejo Canyon. The first group there (where the nest was predated last year) has quite a few stores. The second (where I banded the babies) is essentially out, though I did flush a bird from there. There were also at least 3 birds at the 3rd territory - the big Valley Oaks on the Hastings side of the creek - but no stores that I could see.

Also today Winnie (our captive) Drummed several times on our back porch - the first time I've ever heard her do that.

17 February Winnie drummed a couple more times today.

19 February Pam and I went up Poison Oak Hill this morning, seeing no birds anywhere and finding no evidence of remaining stores in any of the groups anywhere on the hill. It's clearly quite bad up here, though we just went up the spine to the top and did not check the groups off on the Southern side where there are several good granaries.

Pinnacles National Monument, San Benito Co., Calif.

28 February Pam and I drove out here this afternoon and spent the night in the East end. Driving in to the place is a nice valley with some beautiful large Valley Oaks; some of these were granaries with acorns stored but in general the stores

## Melanerpes formicivorus

Pinnacles Natl. Monument, San Benito Co., Calif

(28 February) situation appeared not to be very good. At the headquarters was one group of at least 4 birds (3♂♂, 1♀) very tame (would let you walk up to only a few feet away from them) who had several nice Digger-Pine granaries. This group was in fair shape but ~~did~~ only had a few stored acorns left as far as I could see. This was the only obvious group in the main area. Back at "Pinnacles Campground", where we spent the night, were several birds also, but nowhere did it appear to be a good year.

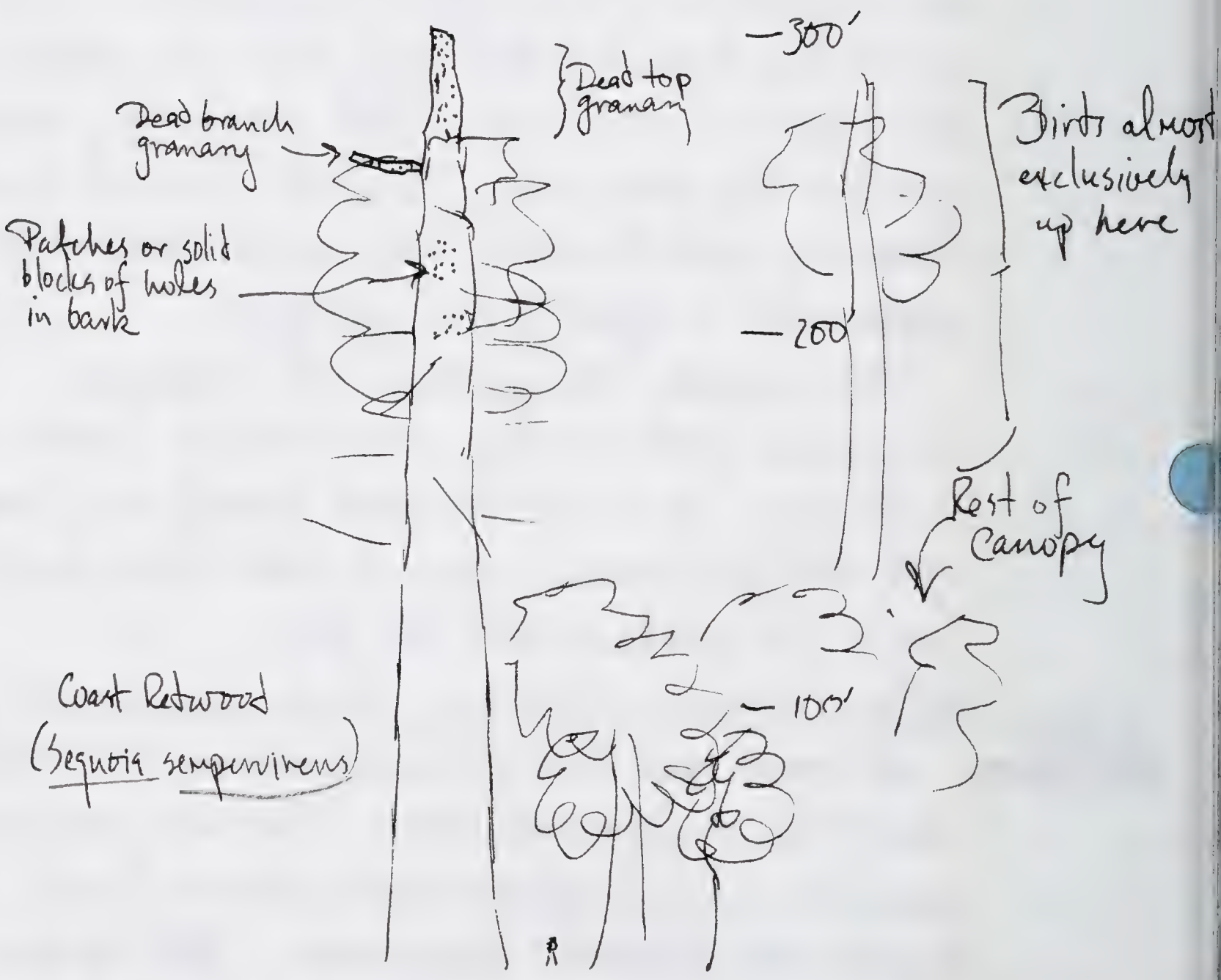
Oaks here were Valley and Live (wizlizenii?). The terrain was great and very reminiscent of Arizona canyons.

The drive up to Hollister passed through nice areas of oak woodland, however again it looked fairly deserted as far as AW went, at least this year.

1 March ~~28 February~~ Big Basin Redwoods State Park, Santa Cruz Co., Calif.

We drove here this afternoon staying overnight in one of the campgrounds there. This area was quite a surprise. I knew Wickers lived in Redwood forests, but I'd forgotten how different things were. Both at our Camp and by the Main entrance to the Park (right at the "Redwood Trail") were several groups, all living high up above the main canopy ~~150-250'~~ 150-300' around the tops of the Redwoods and taller Douglas Firs. I found several granaries, which were either the very tops of Redwoods (which tended to be dead), ~~the~~ dead branches, or in the living bark (see back). Several of the granaries were well-stocked with acorns, unlike anywhere else I've been this

## Generalized Granary at Big Basin



## Melanerpes formicivorus

Big Basin State Park, Santa Cruz Co., Calif.

(1 March) winter (except possibly Palo Escrito). The only 2 mast-producers in the area appeared to be Tanoaks and Live Oaks. Other trees included Wax-myrtle, Douglas Fir, and Madrone.

I was impressed with just how arboreal the birds were here. Clearly they spend most of their time way up in the tops of the Redwoods, descending into the lower oak-Tanoak canopy only to harvest acorns and to sapsuck (I did see a sap limb in one live oak where an AW was feeding right in from the entrance Kiosk). Something interesting appeared to be going on while we were there (in both areas) – lots of Karrit-cuts, some chasing, and generally-high level activity was evident. However, it was clearly a hopeless task to figure out anything – those birds are so high that you can't see/follow hardly anything. In essence – they are unstudiable. (Who's going to climb 300' up to the top of a Redwood just to get at a nest or roost hole?) There were quite a few birds here, however – partially a function of the good crop but clearly this is pretty good habitat no matter how you look at it.

Hastings Reservation, Monterey Co., Calif.

12 March Set up an ambush at Blantwo, where there are possibly a very few stored acorns remaining. However, nobody roosted here.

13 March 900. In taking down the trap at Blantwo a bird flushed from a nearby tree, so possibly there is a "group" (of at least 1 bird) here nonetheless.

## Melanerpes formicivorus

Hastings Reservation, Monterey Co., Calif.

23 March Ted and I walked up over to the territories near Hastings up on Lamberts. We saw no birds, but the territory where the revolution was in April 1977 (Near Lambert) does actually have stores remaining. Neither of the other 2 along the ridge from "Lambert" group have stores, including the one with the big Valley Oak and the near one (Bar-b-q).

Fort Hunter Liggett, Monterey Co., Calif.

31 March Here we drove along the Nacimiento Road about a mile or two past the McLean Trail, then back around the San Miguelito loop. The area here is of course beautiful prime Wicker habitat, with every other Valley Oak full of storage holes. Nonetheless, it's clear that it was a bad year here as well - we didn't see a stored acorn the whole day (I probably looked at 25 granaries at least). We did note 2 or 3 groups (one of 3 birds only along the San Miguelito loop); these birds were staying close to each other and may have been about ready to start nesting. All in all, though, a Wakka was a relatively rare sound here today.

Hastings Reservation, Monterey Co., Calif.

9 April 1245. At Near Lambert there are still stores, but noone is in any of the known, obvious holes.

1700. Nobody at all seen at Blomtwo in passing.

22 April Nobody at ARF, TOO in passing.

## Melanerpes formicivorus

Hastings Reservation, Monterey Co. Calif.

27 April 1600. Ron and I wandered down to Corral Viejo Canyon this afternoon to check out the group there. Basically we found little: no birds were found looking out of holes and only a few calls were heard denoting the existence of any Wickerbills. Both the 2 main canyon groups appear to be out of stores now as well, as befits a year which is as bad as this one.

29 April 1545. 2 AW up at Red House, landing in the Blue Oak in front for several minutes before continuing up the dump road toward the Melin Ranch.

4 May 930. Up at P.O. Hill #1, there are several birds, some of whom (at least) are banded. Seen were ① ♂ Or/Or- M/Or- #374 (seen a few days ago at R3 - one of the 1977 babies here) and ② ♀ M/Red-LB? DB/Or ? → ♀ M/DB-LB? to Blue/Or (both DBlues may be LBlue) see below p.6

950. 3rd bird: ③ ♂ WH/Red-WH #377 (another of the '77 babies).

958. ④ ♂ ub displaced by ♂377 from a tree (clearly ♂ub was an intruder). A fair amount of waka ing up here. There are at least 3 and possibly 4 birds here.

1025. The mystery ♀ was just displaced by ♂374. The ♀ is acting new - avidly greeting the ♂♂ at every opportunity.

1200. Leaving. Looks like only 3 birds here - the two sib ♂♂ on their natal territory and an outside ♀ who hopefully I'll be able to identify with what I've got on her.

The rest of the way I saw some birds but got no good looks and saw noone in any holes. I stopped at the Revolution Group (nothing), checked PO Hill #2, and then went by PO Hill #3 (several birds, some activity, but noone in any holes)

## Melanerpes formicivorus

Hastings Reservation, Monterey Co., Calif.

(4 May) and then passed by at least one other territory (nothing) on the way down. I did not go up past the Revolution Group.

The ♀ seen at PO Hill #1 would appear to have been ♀ Maroon/Maroon ♂ Green/Orange #417 - a bird banded by Pam up at the Arnold Spring back on 18 Sept. 1977!

17 May 1010. I flushed a bird over at Near Lambert today but I did not see anyone in any of the holes.

6 June 1630. Checked the groups in Corral Viejo Canyon. I did flush a couple birds at the C.V. #2 group (where I banded babies last year) but otherwise I uncovered no possible nests and noted nothing unusual or of interest.

11 June 1600. Checked Bar-b-q and Near Lambert, but noted no activity or signs of any nests.

19 June This afternoon Ron and I walked up Poison Oak Hill with remarkably little to show for our efforts. No sign of any nests anywhere (we went up by PO Hill #1, 2, 3, 4, down to the field, and back to the road) and worse yet we only saw 3-4 birds the entire trip. Things are clearly bad up there this year, as they are everywhere else.

24 June Walked over to Corral Viejo Canyon this afternoon, checking the 2 groups in the canyon itself and the 3rd one off toward HNHR slightly. I did see several birds and found an apparent nest at CV Canyon #1 which still must have eggs. I also saw an unbanded ♂ and ♀ at this group. Otherwise there were no clear signs of nests at either of the other groups, though a bird at the third group acted slightly suspiciously.

## Melanerpes formicivorus

Hastings Reservation, Monterey Co., Calif.

1 July 750. A pair of AW were up at Red House, but flew off up the canyon toward the Melin Ranch before I could see anyone's legs.

1115. Bird still in the hole at Corral Viejo #1 - a nest for sure. No other signs of reproduction noted over there, however.

4 July 1500. Over at Corral Viejo #1 the babies have hatched. We started to saw open the hole, but as expected it is quite thick and after an hour or so we temporarily abandoned the attempt.

On the way over, we flushed 2 birds at the 2nd canyon on Blorquist's, one or near the mouth and a 2nd up near the fenceline. Ron saw birds here yesterday as well (1♂ ub, other?) and even watched roosting last night (there's a nice hole in a Blue Oak right in the canyon down from the fenceline) but obtained no more definite information.

6 July 1600. Back at Corral Viejo #1 I finally got the hole opened in order to measure the babies, of whom there are 2:

① DP Wt: 50.0g WL: 21.0mm

② No band Wt: 48.9g WL: 21.5mm

8 July 645. Checked ARF, TOO on the way down from the Arnold and flushed a bird from the tall tree by the granaries, presumably indicating that there are birds here again.

18 July 1845. Banded and bled the babies at Corral Viejo #1 (see 6 July):

① DP → #513 Wt: 89.6g WL: 83mm

② Nob → #514 Wt: 92.8 WL: 84mm

22 July Went up to PO Hill #1 this afternoon where I heard some birds but did not note any sign of nesting in the known holes.

## Melanerpes formicivorus

Hastings Reservation, Monterey Co., Calif.

26 July — I want to note here that as of this date our captive 1-yr-old ♀ Acorn Woodpecker Winnie is molting her 9th primaries, ~~tail~~ and her secondaries from both sides in → e.g. her 4th and 8th simultaneously with #s 5, 6, and 7 old!

11 October — 1320. Wandered over on Blomquist's to Corral Viejo Canyon. The roundup: Blomtwo: no sign of birds or stores.

CVCyn #1: No birds seen. Few if any stores. The limb in which the nesthole was located this spring fell; no sign of casualties.

CVCyn #2: Conspicuously lacking stores, though there are birds here and the place is loaded with acorns. A likely place for a fall nest.

12 October — 1045. Back over on Blomquist's, I first watched the large dead granary out by the road in Corral Viejo Cyn and saw ≥5 birds, none banded (see Gazebo notes). I then watched at CVCyn #2 for 20 min. or so, but saw noone go to the nest tree and discovered no sign of a nest.

14 October — 1645. Up at PO Hill #1 I flushed one bird and saw some stores but noted no sign of a nest.

8 November — 1400. On the way down from the Arnold I noted that the granary along the road at ARF (past the old ARF tree itself) has stored acorns, as does ARF, TOO. There are birds around here.

9 November — 1300. Up from the road towards Warp 5 is an unbanded ♂ (in the large VO). At Warp 5 itself are stored acorns (not a lot, but some). The ♂ plus someone else probably reside here.

10 November — Our pet woodpecker Winnie proved to me today that

## Melanerpes formicivorus

Hastings Reservation, Monterey Co. Calif.

(10 November) Acorns Wdpkrs are happy to eat "grubs" when they come across them by scarfing 2 weevils down which she found crawling around the bowl of acorns we have for her on the kitchen table.

12 November 1230. Over on Lambert's, both Bar-b-q and (especially) Near Lambert are full of stored acorns. I didn't see a single bird while wandering around, however.

13 November 1130. At Blontwo there are enough stores stuffed away to convince me there are birds here, even though I don't know who. Possibly it would be worth checking roosting here.

14 November Walked up Poison Oak Hill late in the morning as far as the Revolution territory, noting 1) 2 birds and plenty of stores at PO Hill #1; 2) there are even stores in the Valley Oak along the ridge heading up to the Revolution territory; and 3) there are plenty of stores in the granary at the Revolution territory itself. Birds were not it great evidence but we did flush and/or hear several in scattered locations around the area. It would certainly be worth spending a day up here looking for banded birds when I get the chance.

15 November 1330. Up over the top of Buckeye Hill, every granary (4 or so that I saw) has acorns. Furthermore, in the large territory in the saddle area just over the top (with the large dead snag out in the open) I found a recently fledged baby (dark eye, yellow edge to bill) sitting up in a tree, and heard the high-pitched harrit of what sounded like another one off in the forest! These birds clearly had a successful fall nest. Before leaving I saw 2 late (fall) babies and 2 (maybe 3) unbanded adults - a ♂ and a ♀. Interesting group!

# Melanerpes formicivorus

Hastings Reservation, Monterey Co. Calif.

28 December 1400. I snuck over to Bar-B-Q on Lambert's this afternoon and found that the better part of their granary (the high limb with most of the stores) has fallen, apparently in the storm of a few days ago as the limb is fresh and still stuffed full of acorns. I'd say these birds lost a 1000 holes easily and may not have more than a few hundred left.

Walter D. Koenig



# Melanerpes formicivorus

## Chongo — Hastings Reservation

17 February — 1315. No sign of any birds or stores here.

13 March — 1230. No sign of life here.

25 June — 1330. Nobody over in the main area. However - over in the tree with the holes over on Buckeye Hill across from Chongo is a nest - not necessarily Acorn Woodpeckers and may be not Chongo's even if they are (Buckeye?) but something that deserves my immediate attention nonetheless.

1335. Bird flying this way from Buckeye!

9 September — Noone in this area today as I wandered around doing vegetation transects.

10 October — 1010. No sign of stores or any birds here in passing.

6 November — 1100. No sign of anything over here as far as I can tell from Buckeye Hill through the scope.

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# Melanerpes formicivorus

Buckeye — Hastings Reservation

20 January 1215. Watching. Still doing pretty well on acorns here.

1330. There are birds here, but they are shy of the hide. Think I'll go, leave the hide, and try again in a day or so.

22 January 930. Watching.

1010. ① ♀ ♂ub DB-Or #373. DB-Or/M. Here briefly.

1030. ♂ub. ♀ub; both here with ♀373. Possibly a 2nd ub ♀ here.

1050. ♀373 hasn't stopped "chattering" like a baby since she got here (♀ub has been sitting here the whole time as well).

1055. ♀ub left, but ♀373 still continues to chatter!

1130. ♀373 and ♂ub back.

1145. Leaving. Looks like just these 3 birds here, though it may be that there is a 2nd ub ♀ (but I actually rather doubt it).

5 February Watched here at dusk, when I saw at least 4 birds, all of whom (I think) roosted in the low hole!

7 February 700. The ambush was a full success, netting ♀373, 1 unbanded ♂ (now #481) and 2 unbanded ♀♀ (♀482 and 483). Everyone look like an adult, as expected. The whole group is now presumably banded.

11 March 1035. ♀482 at Plaque - see Plaque notes.

13 March It may be premature, but it looks good for ♀482 moving down to Plaque → ♀482. Moved to watched grp 10 March 1979.

12 April 850. Up here with Larry Hawkes. Flushed 1 bird from granary on arrival. Noone in any holes, also No stores, best I could tell. Now watching from hide.

950. Leaving Larry here. Noone's returned yet.

## Melanerpes formicivorus

Buckeye — Hastings Reservation

22 April 1820. Flushed at least one and probably 2 birds from the granary on arrival (wakas heard on the way up). Larry reports that birds are eating some acorns here, so they apparently do have some stores left.

1910. All 3 birds roosted here on schedule in the low hole where I ambushed in February.

28 April Larry Hanks has now reported seeing ♂252, formerly of Chongo, here both on 14 April and again today. In neither case ~~was~~ did he appear to be intruding. Thus, at least for the time being, I will add him here:

Add: ♂252. Not here 7 February, here on 14 April → Moved as Adult on 12 March 1979 (± 1 month).

25 June 1345. Lo and behold, these birds apparently have a nest with babies in the tree across from Chongo over on the far side of the ravine from the granary here (see Chongo notes). We obviously need some serious catching up here!

1600. Indeed it is a nest and there are 3 babies, 2 well along and the 3rd dubious. I marked them and measured their wings. I'm also assuming that this is Buckeye's nest, though I suppose we won't know for sure until we watch here.

26 June 1900. Watching the nest, ostensibly for roosting but I'll take whatever I can get.

2000. Noone came until just before dark, at which point all 3 ♂♂ (♂♂234, 252, and 424) came virtually simultaneously and then all left almost as abruptly as they'd arrived. Then a few minutes later a bird returned who 1) was not ♂252, ~~was~~ 2) almost certainly was not ♂234, and 3) had a very distinct

# Melanerpes formicivorus

## Buckeye Nest Record — Hastings Reservation

25 June 1600 — Hole opened: 3 babies

| | | #503 ① Blk-Mauve | #504 ② Wh-Blk | ③ |
|---|---|---|---|---|
| (day 12-13 maybe as far as day 17) | 25 June 1600 (wt only) | 36 mm | 38 mm | 17 mm |
| | 1 July 1700 (wt) | 67.0 59 | 74.7 65 | (gone) |

## Melanerpes formicivorus

Buckeye Hastings Reservation

(26 June) facial pattern more or less matching what Larry described for ♂424. The I therefore conclude with reasonable though not absolute certainty that ♂424 spent the night in the nest.

By the way, I also checked the granary here and could find no stores to speak of. Note, however, that Larry had seen birds getting acorns from here a while back.

30 June Watched the nest today from 1330-1700. See compilation on back.

1 July Watched here from 1400-1630, after which I went up and banded the 2 ~~babies~~ remaining babies, now #503 and 504.

2 July Time to bring this group up to date:

① ♂252, the first of the Chongo ♂♂ to appear here, I am going to change to → Moved as Adult on 1 April (± 1 month). This change is somewhat arbitrary but fits in slightly better with the later arrivals of the other 2 ♂♂. In truth, the latter estimate (see 28 April) is more accurate.

② Add: ♂234, ♂424. Larry has fairly good notes to indicate that ♂252 preceded these birds. Though he saw ♂234 first on 28 April and ♂424 not until 17 May, there is less evidence to suggest that these birds came separately. Thus both → Moved as Adults 21 April (± 1 wk).

Purge: ♂481. Last seen at the ambush of 7 February. Gone for sure by 14 April → Dis. about 12 March ± 1 month.

5 July Watched the nest from 930-1230. See compilation on back.

7 July Watched the nest from 1410-1640. " " " ".

Note the appearance of ♀371 (seen also by Larry here a few days ago), formerly of Chongo. [Note that this bird disappears

## 30 June 1330-1800 Nestwatch

0.00. Go.
– 18.00. ♂? fed.
30.00. (0.00)
– 9.00. ♂424 fed (bolus ③)
• 9.45. ♂234
• 34.00. ♂234
– 34.15. ~~♂424~~ ♂?
• 42.00. ♂234
✓ 43.00. ♂252
• 46.30. ♂234
0.00
– 5.15. ♂424
– 20.00. ♂?
• 25.00. ♂234
• 32.00. ♂234
• 37.00. ♂234
• 52.00. ♂234
– 53.00. ♂424 ①
0.00.
• 0.15. ♂234
– 14.00. ♂424, removed FS
✓ 17.00. ♂252
– 18.00. ♂?
✓ 19.00. ♂252
• ♂234
✓ 20.00. ♂252
– 29.00. ♂424, rem. FS (RFS)
• 32.00. ♂234
• 46.00. ♂234 ②
– 47.00. ♂424 ③, RFS
– 50.00. ♂424, RFS
• 52.00. ♂234
– 54.00. ♂424
0.00. Me leaving

Total time watched: 210 min

| | ♂424 | ♂234 | ♂252 | ♂? | Total |
|---|---|---|---|---|---|
| #Feeding visits | 8 | 13 | 4 | 4 | 29 |
| #F.S. removed | 4 | 0 | 0 | 0 | 4 |
| $\bar{x}$ bolus size (N) | 2.3(3) | 2(1) | – | – | 2.25(4) |

## 1 July 1400-1630 Nestwatch

0.00.
× 14.00. ♂252 fed
✓ 21.00. ♂234 - bolus ③
– 24.00. ♂424 fed and RFS (removed fecal sacs)
✓ 41.00. ♂234 (fed)
× 44. ♂252
× 50. ♂252
✓ 51. ♂234
✓ 51.15. ♂234
– 53. ♂424
✓ 2. ♂234
– 10. ♂424, RFS
× 11. ♂252
– 14. ♂424, RFS
× 20. ♂252 ③
✓ 21. ♂234
– 38. ♂424, RFS
× 39. ♂252
× 45. ♂252
– 51. ♂424, RFS
– 59. ♂424
✓ 12. ♂?
✓ 15. ♂234
< 23. ♂252
30. Me leaving

Total time watched: 150 min

| | ♂424 | ♂234 | ♂252 | ♂? | Total |
|---|---|---|---|---|---|
| #visits | 7 | 7 | 8 | 1 | 23 |
| #FS Rem. | 5 | 0 | 0 | 0 | 5 |
| $\bar{x}$ bolus sz (N) | – | 3(1) | 3(1) | – | 3(2) |

## 5 July 930-1230 Nestwatch

0.00.
× 3. ♂234 (fed)
× 15. ♂234
– 15.15. ♂424
– 19. ♂424, RFS
– 22. ♂424
✓ 22.15. ♂252
× 24.20. ♂234
30. (0.00)
× 0.15. ♂234
– 1. ♂424, RFS
• 1.30. ♂234
• 3. ♂234
✓ 10. ♂252
– 16. ♂424, RFS
• 17. ♂234
• 21. ♂234
✓ 22. ♂252
44. ?(fed)
✓ 44.15. ♂252
• 48. ♂234
– 50. ♂424, RFS
× 52. ♂234
✓ 53. ♂252
• 54. ♂234
× 56. ♂234
1. ♂234
✓ 1.15. ♂252
– 1.30. ♂424, RFS
✓ 6.00. ♂234
– 10. ♂424
^ 12. ♂234
– 18. ♂424, RFS
× 24. ♂234
× 33. ♂234
> 41. ♂234
– 50. ♂424, RFS
– 52. ♂424, RFS
× 53.30. ♂234
✓ 1.00. ♂252
– 15. ♂424, RFS
30. Me leaving

Total time watched: 180 min

| | ♂424 | ♂234 | ♂252 | ? | Total |
|---|---|---|---|---|---|
| #feed. visits | 12 | 19 | 7 | 1 | 39 |
| #F.S. removed | 9 | 0 | 0 | 0 | 9 |

## 7 July 1410-1640 Nestwatch

0.00.
0.00. still nothing
– 1. ♂424, RFS ✓
19. ? fed.
– 29. ♂424, RFS
– 30. ♂252
– 35. ♂252
✓ 36. ♂234
– 36.30. ♂424
✓ 38. ♂234
✓ 39. ♂234
✓ 40. ♂234
51. ♀ R-W/M R-W/Red # 371 at hole; looked in; moved up limb. ♂424 landed; tidbit fed. Chasing in background, presumably of ♀.
0.00 –
– 12. ♂424, RFS.
30. Me leaving

Total time watched: 150 min.

| | ♂424 | ♂234 | ♂252 | ? | Total |
|---|---|---|---|---|---|
| #visits | 4 | 4 | 2 | 1 | 11 |
| #FS R. | 3 | 0 | 0 | 0 | 3 |

## Melanerpes formicivorus

Buckeye — Hastings Reservation

(7 July) from Chongo in September following fledging in 1977 and hadn't been seen since. So much for no juvenile dispersal!]

2 August 1900. Checked the hole here but with ambiguous results. There were no remains inside which were clearly attributable to a decayed carcass. However, there were a few feathers, dermestid pupae, and lots of lice - enough to make me suspect that one may have come and gone already. In any case, there was not enough evidence for me to scratch the 2nd baby here for certain.

10 October 850. Watching from the hide at the granary.

851. ♀ DB-Or/DB-Or #424 appeared right away, briefly. The birds do have a lot of stores here already.

950. Nothing else. Going to check the nest area and will leave the hide here for a later try.

13 October 900. Watching. No sign of anything over at the nest.

905. ♀ DB/LP-Bl #252 came with an acorn by himself.

1000. Leaving. Clearly very little is going on here at the moment.

6 November 945. Watching. The granary here is pretty well filled with stores.

1100. Nothing at granary. Over beyond the nest tree I came across ① ♂ Wht-Red/M #504.

# Melanerpes formicivorus

Plaque — Hastings Reservation

4 February 1030. There was just a chase here, with one bird getting chased from the Plaque tree out of the area by another (presumably the resident).

1035. ①♂ Colwn #473 in tree 2.

17 February 1300. 1♂ atop Plaque. Counted stores: 214 (all but 7 in Plaque).

24 February Ron saw ♂473 here today.

28 February Jim Griffin reports having seen 1 or 2 crows sitting on one of the dead storage limbs here this morning stealing acorns while an AW tried in vain to dissuade them from the pilfering.

11 March 1035. Heard a Waka here and indeed there was a bird here- so I looked and it turned out to be ♀ M/LB Wh-Red #482, one of the ♀♀ I caught last month at Buckeye. She immediately flew to the telephone pole and checked out the holes there, then flew to the 2° tree.

1200. ♀482 still here; also a ♂, presumably ♂473. There are some stores left here, but I decided to begin priming them with added ones so I put a limb up with 100 good acorns into Plaque at 1230.

Count of stores not counting my addition: 172 (not bad!)

1500. ♀ on the added limb when I passed by.

12 March 910. A ♀ is preening in 2° tree: ♀ M/LB #482. Looks pretty certain that's she's intent on staying.

13 March Add (hopefully not too hastily): ♀482. Moved as adult ~10 March 1979.

14 March 1825. I flushed 1 bird apparently roosting in the Blue Oak by the labs; he went and sat up in the Blue Oak towards MacRoberts alone for some time before I lost track of him. In any case, there was no indication of there being a 2nd bird here, and so my guess

## Melanerpes formicivorus

Plaque — Hastings Reservation

(14 March) is that ♀482 may not yet have gone all the way and is probably still roosting at Buckeye.

15 March 1800. 2 birds here; ♀LB/ #482 on the added storage limb getting some goodies.

25 March 1310. ♀LB/wh-Red #482 in Plaque tree. Later Ron saw both ♀482 and the ♂ (♂473).

1 April 900. Both ♀482 and ♂473 here. Also lots of Karrit-cuts and the like possibly denoting intruders?

920. After quite a to-do here I went out and did see a 3rd bird get displaced from the 2° tree. She flew up to the top of the Sycamores and turned out to be a ♀ub.

2 April 1730. Added another 55 acorns to the few they had left in the stub that I gave them.

10 April Added another 60 acorns.

12 April 830. ♀M/LB #482 seen here.

13 April 1230. PLW reports: 2 AW in Blue Oak by labs (next to labs). Lots of noise: ♂Nuttall's Woodpecker very upset there. Next: AW chasing the ♂NW, followed by ♀AW looking into a hole in the tree. Hole is clearly shallow and unfinished; bird is throwing out woodchips. ♀AW moved away from hole (bothered by my presence?). NW moved back to the hole slowly, got near and then was chased by the 2 AW again (away from the hole but not out of the tree).

Later I checked the hole - it is new and in one of the rotten limbs (this is the tree they nested in in 1975 and 1976), and is quite small in diameter. Hard to know why the AW would care so much. Whose hole is this, anyway?

# Melanerpes formicivorus

Plaque — Hastings Reservation

20 April 930. Added 65 acorns to the new limb, which was plumb out.

23 April 925. I can't see his bands, but a ♂ is preening over in the trees by the upper barn.

27 April 940. Watching. 2 Garricks almost immediately.

952. A few more garricks far off, but all quiet here.

1000. ♀ here atop Plaque. Flew to trees by Upper Barn.

1010. ♀ now alone atop of 2° tree.

1019. ♀ LB/Wh-Red #482.

1025. When a 2nd bird began karrit-cutting up above the row of trees by the upper barn somewhere the ♀ (482) in the 2° tree gave 2 Garricks.

1027. ♀ gave several more Garricks and then some wakas as a ♂ flew over to the sycamores by the creek.

1030. After all this the ♂ appears to be ♂ Lg/wh #473. ~~Father~~ He flew up to the Blue Oak above the labs and shortly afterwards was joined by the ♀.

1040. Leaving. Guess things are alright here after all, though there is definitely something odd about the way the ♂'s acting.

12 May 715. Bird in '78 nest hole - could be it.

1400. Checked hole - 4 eggs (marked 1-4). They were not fresh, however - this nest is several days old already.

15 May 1410. Bird in hole.

16 May 1100. Checked the hole and measured the eggs, which are all doing just fine.

18 May 1150. ♀482 seen in Plaque tree shagging out a Nuthatch.

23 May 1000. Checked the hole, which has 3 babies and one

(go to p. 5)

# Melanerpes formicivorus

Plaque Nest Record — Hastings Reservation

12 May 715 — Bird in hole.

1500 — Hole opened - 4 eggs, not fresh (opaque) Marked 1-4.

16 May 1000 — Still 4 eggs, warm:

① 27.1 × 21.0

② ~~28.6~~ 26.8 × 21.2

③ 25.2 × 20.6

④ 26.0 × 21.0 (did not hatch)

23 May 1000 — 3 babies and 1 egg (#4)

The egg was opaque.

| | | #489 ① Tan-Red | #488 ② DP-Red | #487 ③ BP-Or |
|---|---|---|---|---|
| 4-5 | 23 May 1000 (wt / wing length) | 11.2 / 11 mm | 25.3 / 13 mm | 24.0 / 13 mm |
| 10-11 | 29 May 1600 | NO EGG | 42.1 / 20 mm | 58.2 / 27.4 | 64.3 / 25.8 |
| | 9 June 1300 (wt / WL cul Mem) | 83.2 / 73 / 21.3 | 80.8 / 88 / 22.9 | 92.0 / 83 / 23.4 |

# Melanerpes formicivorus

Plaque — Hastings Reservation

(23 May) opaque but unhatched) egg in it!

One of the larger babies had 2 small punctures in its belly which looked as though someone's exit was not too graceful. However, they were healing and I suspect he'll be fine.

29 May 1515. Noticing that these birds are just about entirely out of stores, I went up and put about 90 more acorns in the added limb.

1600. Measured and collared the babies, all 3 of whom are fine! Though ③BP-Or was the heaviest, ③DP-Red was the furthest developed, with primaries already several mm long (those of ③ had barely erupted). The unhatched egg was gone.

8 June Checking the stores here, the birds appear to have cleared out the stock I gave them, and otherwise I could only find 11 good-looking ones in the granary.

9 June 1300. Banded and bled the 3 babies, who are the first of the year, beautiful as always, and now #487, 488, and 489.

11 June 1845. ♀482 in Plaque tree with a Tipulid.

18 June 1115. Juvenile looking out of hole.

19 June Nancy reported having seen fledglings here this morning. (she later retracted this, however!).

I also added 80 or so acorns to the depleted stores here this evening.

24 June 1530. Pam reports having seen ~5 AW up by MacRoberts (!) including 2 babies, apparently 1) j ♂ or-DB #489 and 2) j ♀ wh/wh #488. This must have been the whole Plaque group wandering up here! This was before the fallen granary up there and in (~150'?) from the fence

# Melanerpes formicivorus

## Plague — Hastings Reservation

4 July — Added another set of acorns into the Plague tree in an attempt to lure the babies back into the area.

26 July — All this afternoon while I was working in the labs there was an intermittant racket here as if someone were quite upset. Occasional Karrits, calls, etc. by at least one excited bird in this area made me wonder what was up, but I never got a decent look at anyone.

29 July — Still an odd amount of activity here this morning.

2 August — 1410. ♀ LB/wh. #482 atop Plague tree.

1700. Still a lot of activity here. There are 2 birds but what's up? Two birds just disappeared up the hill behind the upper barn - possibly from Buckeye?

Checked the hole here but found no sign of any remains of babies inside.

3 August — 825. ♀482 here again.

840. A flurry - 3 birds in 2° tree; one being chased. ♂ LG/M #473 LG/wh remains behind to karrit-cut for several minutes.

17 September — Purge: j488 and j489. Seen by Pam Williams over by MacRoberts on 24 June, not seen by Nancy Joste on 28 or 29 June; also only 2 birds roosted here on 5 July → Disappeared about 26 June.

21 September — 1400. Well. Another coup for the birds. Ron, by accident, stumbled upon no less than a nest with 2 babies in it up in the spring nesthole ~~or~~ while I was gone on the 19th. So I dashed up this afternoon and indeed, the babies were well along, and in need of banding. (one (#521) weighed 79.4gm [wl 88mm], the other (#522) weighed 82.8gm [wl 86mm].

## Melanerpes formicivorus

Plague — Hastings Reservation

(21 September) Based on these figures, their age ~~was~~ is about 25 days (23-27 days, at any rate). Working backwards, this means they hatched on 28 August ± 2 days and ~~the egg~~ that incubation began about 16 August ± 2 days. Impressive, to say the least. (We knew the crop would be good by then and I guess they did also!)

One of the babies was adventurous enough to fly out of the hole and flop directly down to the ground when I went up - thus confirming their rather advanced state. Both were similarly developed - #522's crown was slightly further along but #521 had a slightly longer wing. I banded and bled them both and then returned them to the nest.

28 September 1600. On my way up to the nest here both babies flopped out and "fledged" before I could arrive - j522 went 1st, followed shortly by j521. Both made it to the lower sections of nearby trees (they flew fairly well), where after some chasing I managed to catch them both. This allowed me to change a band on j521 and also to measure them both:

| | wt. | wl | |
|---|---|---|---|
| j521 | 78.9 | 121 | |
| j522 | 81.6 | 118 | (Crown still further along than j521) |

These are essentially measurements "at fledging."

Following this I returned both to the hole and blocked them in until I could remove my interference.

5 October 1450. Watching. All the cavities in the telephone pole are stuffed full of fresh acorns. Not only that, but apparently within the last several days they've stored several hundred acorns in their granary.

# Melanerpes formicivorus

Plaque — Hastings Reservation

(5 October) 1506. ♂ by himself over by the upper barn, just sitting.
1510. Quiet. Leaving for now.
1705. ① ♀ LB/Wh-#482 over past the Pumphouse with ② j Blk-Wh/M #521. ♂ here also. So one of the kids has made it, at least.
1715. ③ ♂ LG/M #473 in Plaque tree.

10 October 1020. Atop Plaque is the ♀ and j M/Dk-Light Wh/Dk-LG(n) #522. ♀ LB #482 seen.
Counted stores: Plaque tree 418
2° tree 1
Tel. Pole ~80 (stuff in holes)
} 499

13 October 834. ① j Blk-Wh/Or #521 and ② ♂ LG #473 atop 2° tree. Juv. joined briefly by ③ ♀ M/LB #482 with an acorn.

3 November 1603. j521 in Plaque tree.

11 December 1430. Watching. ① j M/Dk-LG(n) #522 in 2° tree. Picked an acorn.
1140. ② j Black-Or #521. Both babies still ♂-type.
1500. ③ ♀ M/ #482 sitting around. Also ④ ♂ LG/M #473 off in the back. Everyone here. Going to count stores, etc.
Counted stores: Plaque tree: ~~114~~
2° tree: 55
Tel. pole: 200 ~~1500~~ (est. - the roost hole is full of acorns)
} 1396

And they may not be done yet - there are still acorns in the trees here. Even the limb I put up in the Plaque tree from Chongo was filled with nearly 80 acorns!

I also collected a sample of 50 stored acorns from Plaque, replacing them with ones of my own.

12 December 1500. Took some pictures of the holes in the telephone pole stuffed full of acorns. Also added a sample of 25 acorns from one of them to the 50 I got yesterday.

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# Melanerpes formicivorus

Hastings Reservation

4 February — So far my periodic checks here have given me no reason to suspect anybody of living here so far this year.

12 April — Still no indication of rebirth here.

20 April — 1020. On the knoll are 3 birds, apparently the 1500 birds - at least ♂297 was identified and the other 2 appeared to be his.

1028. Now some fighting on knoll by the nest tree - ♂297 chasing 1 or 2 other birds.

1030. ♀ub here. ♂297 interested in the hole in the trunk.

1035. These 2 birds here, possibly noone else. Not clear what's up.

23 April — Pam reports seeing an Acorner fly up to the pine trees by the School House this morning.

29 April — 800. 3 birds up by the '75 nest tree (on the knoll) making a racket.

805. Birds are somewhere on the other side of the knoll now.

806. ♀ub here now looking into the hole. Possibly birds are finally getting interested here.

5 May — 1305. A bird just flushed from mid-Blomquist knoll.

6 May — 815. 3 birds were along the Dump Road just down from the Davis' and up from the Y.

10 May — 1015. Larry advised me that there are 2 birds here on the knoll - an ub ♂ and a banded ♀. I'm now watching and there is indeed activity here. ①♂ub. Examining the new hole in the '75 nest tree. Hopping around in the tree now. One remige appears to be broken and sticks out at an odd angle in the his back. (in Right Wing : }o )

1023. ♀ hawking from locusts in front of barn: ②♀or-DK/M

1025. ♀ Yel-D4/Yel-D6? Now in locusts again.

## Melanerpes formicivorus

Y Hastings Reservation

(10 May) 1030. The ♂ is investigating all over here - the knoll, the locusts, the live Oak at the corner, even the Valley Oak granary.

1035. The ♂ is definitely ♀ Yel-DG/Yel-DG / Yel-DG/M (DG or Black).

1145. Break ended. ♂ is ♀ Yel-Blk/Yel-Blk / Y-B/M #397, fledged at Weate in 1977 and last seen there on 5 July 1978. She is now back up at the hole on the knoll. I just heard a few soft Garricks, but all in all these birds are ~~feed~~ fairly sedate, though they do greet each other regularly. Nonetheless, they are giving an occasional Garrick, even though, as far as I know, they are the only 2 birds here.

1150. Both birds on the knoll, and both look quite serious. I think they may be here for good.

1220. Both birds are in the Valley Oak along the dump road just down from John's House fighting off some Downy and Nuttall's Woodpeckers, who themselves are fighting over some hole(s) here. The AW are not being very thorough, but are clearly interested in checking out the whole area here and, to some extent, asserting their dominance (don't quote me on that). Actually, there are some bigger holes in the tree here which the AW were interested in; they were not the objects of contention for the smaller woodpeckers, however.

11 May 615. At least one and I assume both birds were here this morning in passing. I also heard some Garricks as I passed - no doubt about it - new birds seem to Garrick even when there are no other (apparent) intruders or rivals.

## Melanerpes formicivorus

Y Hastings Reservation

16 May There have been regular indications of birds persisting here since the action last week, at least up until the last few days. I've noted nothing here during the last 2 days.

1400. Now watching; no birds evident.

1440. Still nothing. Looks as though these birds may have decided to move on. I'll keep an eye out, but there may not be a group here anymore.

930. Pam reports that 3 birds (possibly 1 separate) were hanging around here this morning (particularly up the dump road slightly). So there may be hope afterall.

1600. 1-2 birds down at the Pump; 1 flew up toward the knoll and may have been from this "group."

18 May 1015. ①♂ub and I believe a 2nd bird hawking from the locusts in front of the barn. Also, 2 birds were up on the knoll a few minutes ago.

19 May 715. Two birds here in front of the lower barn: ①♂ub and ②♀yel-Blk/M #397. Looks good for this group after all!

720. Birds are still peering into the hole up on the knoll in the '75 nest tree.

Ron watched roosting tonight and reports that the birds (2) are roosting in the large Valley Oak up the canyon just passed the '77 nest hole.

2 June 645. 1 bird sitting atop the sycamores at the Y.

7 June 1740. No one here in passing, nor have I noted anyone here in the last several days.

21 June Pam reports seeing a banded bird (M on left leg) on

# Melanerpes formicivorus

Hastings Reservation

(21 June) top of Blomquist Knoll this morning. Otherwise, however, these birds continue to keep themselves quite scarce.

23 June Pam reports having seen a ♂ at the Lower Barn about 1000.

26 June 700. A bird flushed from the Lower Barn over to the hole in the Blue Oak ('75 nest tree).

740. Now here watching. Two birds here by the L Barn.

745. Both have now left.

750. Going for a quick check around.

2 July Though I'm still uncertain what the story is here (there do seem to be birds here occassionally, but they do well at remaining hidden) I will go ahead and add ♀397 and an unbanded ♂, moved (formerly) here on 10 May.

4 July 1630. Bird in locust in front of Lower Barn.

20 July 540. Bird in Pines by John's house; flew to Lower Barn. Now wakes down there between 2 birds.

26 July 1130. Bird at the new hole in the '75 nest tree.

1730. Bird sitting in the dead locust in front of the lower barn.

27 July 1145. Flushed 2 birds up in the Pines by the School House; flew toward the lower barn.

1945. Checked all the known holes at dusk and generally kept an ear open for birds, but didn't hear anyone.

13 September 645. 1 bird, at least, up on the knoll. Lots of acorns up there also. Could be the start of an influx here, at last.

650. ♂ Yel/DPink Yel/DP #402 (!) Karrit-cutting here. He may be the only bird here. He definitely would appear to be interested.

17 September Purge: ♀397 and ♂ub. Both last seen 19 May, with fair-poor inferential data to suggest that

# Melanerpes formicivorus

Y Hastings Reservation

(17 September) they were hanging around through June (Pam, at least, reported seeing birds in this area regularly) and possibly into July. Noone here in August or early September for sure → Abandoned about 30 June ± 2 wks.

15 October 1209. In the locusts behind the lower Barn is ♀ white/M, no doubt ♀260 from School Hill. She flew off toward the SH direction, but calls indicate she's hanging around, at least for awhile.

1979 Walter D. Koenig

# Melanerpes formicivorus

1500 Hastings Reservation

21 January 1330. Flushed 3 birds from here inc. ♂298 and ♂297 (for sure).

12 March 930. Watching. ① ♂ Yel-D6/Or #297 flushed from Tree 1 on arrival.

945. ② ♂ Lg-D6/Lg-Yel #298 here, flew to '78 nest hole possibly to shag off a Bluebird who had been checking it out.

948. Both ♂297 and ♂298 in Tree 1 now. No sign of 3rd bird.

1002. ♂297 and ♂298 now in Tree 3 together. Still no sign of ♂88.

1030. Looks bad for ♂88. Also no ♀ here yet.

Counted stores: Tree 1: 436 } 708.
Tree 2: 272 }

14 March 1805. ≥1 bird already roosting in '78 nest hole.

27 March Ron watched here today and saw only ♂♂297 and 298. At least one bird roosted in the granary as well.

2 April 1300. ♂♂297, 298 with a banded ♀ here at the "nest" tree of 1800 (actually more part of 1500 for some time now) see 1800 notes!

The ♀ here with the ♂♂ is ♀435-banded at a Revolution at Plaque on 24 April 1978 (and seen down at the Pump several times right afterwards, I believe). A good find!

Purge: ♂88. Last seen 31 December 1978, gone by 12 March (also note that "3" birds were seen here on 21 January): Disappeared about 15 February ± 2 weeks.

Add: ♀435. Not here 27 March, apparently in by today→ Moved to 1500 as adult 2 April (± 1 week).

13 April 1045. These birds are over at 1800 again, eating catkins and possibly sapsucking in the forest next to the chaparral. 2♂♂ (♂297 for sure) and a ♀ were seen as 2 of them flew over

# Melanerpes formicivorus

1500 Hastings Reservation

(13 April) back towards 1500 via the 1800 "nest"

19 April 530. An ambush here netted all 3 birds (♀435 ♂297, and ♂298) without incident (except that one of the birds gave a strange, decending, owl-like call from the hole before coming out and while it was still dark). Blood was taken from all 3; I gave wing-streamers to the 2 ♂♂. All were handled as quickly as possible and returned by 545.

None had any sign of a brood patch-all had feathers still on their bellies. Also ♂298 had no obvious cloacal protuberance (I failed to check ♂297). Thus, it would appear that these birds are not ready to nest yet. They do still have stores, however, so they ought to nest eventually.

I did not leave the area. Between this and doing things immediately, there was no sign of any intruders taking over by the time all 3 were returned.

20 April 1020. Birds over at Blomquist Knoll. See Y notes. (♂297 at least)

23 April 1910. These birds gave no indication of where they are roosting this evening. Most annoying.

29 April 800. Here primarily on a Starling vigil, all 3 birds flushed as I arrived. Also I counted stores:

Tree 1: 276
Tree 2: 190
} 466.

830 ♂ DBLW#297 seen along with a ♀ and 3rd bird.

1020. Both ♂297 and ♂298 in tree 3.

12 May 1600. Checked the hole here-no problems.

14 May 1930. Argh! New hole found in tree 2: 1 ♂ roosted here.

# Melanerpes formicivorus

1500 Hastings Reservation

15 May 815. Hole opened: 5 eggs, measured and returned.

930-1115. Watched the nest. Nobody ever entered it (except for a Bluebird); thus, incubation must really just be beginning.

0.00. Nothing
0.00. Nothing
9.45. ♂298 looked into hole
955. Leaves.
1500. Bluebird checking out hole.
2000. ♀ here.
2300. ♀ flew over and greeted ♂298 - vigorously.

♂298 > ♂297 → 2950. ♂297 on branch. ♂298 flew to him. ♂297 chattered at ♂298 for several seconds. ♂298 did not chatter back.

535. ♀♂35 at hole
710. ♀ flies off.
000.
1500. Still nothing.

Watched for 105 minutes. Note the dominance interaction between the ♂♂ at 2950.

1930. All of a sudden it looks very bad for the nest here. Though my disturbance this morning was minimal, none of us saw any visits into the hole all day and, even worse, noone roosted in the hole tonight. Whether this was my fault or the result of the Bluebirds who were hanging out there much of the day (and actually seen going into the hole by Nancy) or some unknown third catastrophe between 815 and 930 is anyone's guess. However, it looks like a premature end here. I may learn more tomorrow when I check the hole again.

16 May 730. Checked the hole, which had noone in it but still had all 5 eggs and except that they were cold, looked fine. I suppose they may do it yet with these eggs.

1930. Larry watched the nest this evening and reported

(go to p.5)

# Melanerpes formicivorus

1500 Nest Record — Hastings Reservation

14 May 1930. Hole discovered. ♂ roosted here

15 May 830. Hole opened: 5 eggs, fresh.

① 24.6 × 20.0 ✓

② 24.2 × 20.4 Did not hatch

③ 25.0 × 20.0 Did not hatch

④ 25.1 × 20.5 .

⑤ 24.7 × 20.1 Did not hatch

Bird flushed from hole as I arrived.

1930

Noone roosted here; nest apparently abandoned (see notes).

16 May 730 Still 5 eggs, cold.

24 May 645 Two babies and 3 unhatched eggs (#2, 3, and 5).

| | ① Or-Brn #492 | ② #493 | |
|---|---|---|---|
| 24 May 645 | 6.8 gm | 4.0 gm | |
| 25 May 615 (wt WL) | 8.8 (9.1) | 6.0 (7.7) | Eggs Removed |
| 27 May 530 | 16.2 (10.8) | 13.0 (9.9) | |
| 30 May 930 | 33.2 (14.3) | 24.5 (13.8) | |
| 2 June 1045 | 49.0 (21.0) | 44.5 (18.0) | |
| 4 June 1400 | 59.5 (27.4) | 53.9 (25.3) | |
| 5 June 1045 | 61.0 (30) | 56.4 (28.0) | |
| 13 June 1100 | 77.2 (74) | 77.3 (69) | |
| 23 June | Fledged (see N. Joste's notes). | | |

## Melanerpes formicivorus

1500 Hastings Reservation

(16 May) good news: first, he flushed the ♀ out of the hole when he arrived; second, he saw all 3 birds pre-roost mount on top of each other (a true ménage a trois), and finally, a bird did roost in the hole. Thus, it would seem as though the nest is on after all!

17 May 1350-1620. Watched the nest at 1500. See compilation on back.

~~18 May 1150. ♀182 seen in the Plaque tree staging nest a Watchtele.~~

18 May 1400-1630. Watched the nest, where incubation continues. See compilation on back.

19 May 720-1020. Watched the nest, see compilation on back. Note the interaction between ♂297 and ♂298 at 11.30 again suggesting that ♂297 is subordinate.

24 May 645. As expected, hatching has begun(?) here. The 2 babies were both young and probably hatched late yesterday. The other 3 were still eggs, and though opaque and shiny, there was liquid which moved around in each of them, suggesting that they probably will not hatch.

25 May 615. Weighed the 2 babies, who are still very small. I also removed the 3 eggs, which are still unhatched and clearly going to remain so.

Checking the 3 eggs, all 3 had a small (~6mm) embryo; thus all had been fertilized.

2 June 1045. Weighed the 2 babies, who are both in good shape. I tried collaring them from 1100-1300, but to no avail - there were no feeding visits during this entire period. There are also still stores remaining here.

## 17 May 1350-1620 Nestwatch (incubation)

♀ 0.00. ♀435 in hole. Looking out.
3.50. looking out
5.45. " "
13.20. " "
0.15. Back down.
5.15. " "
7.15. " "
14.30. Leaves hole.

17.05. ♂298 entered.
27.45. Looking out
28.00. Climbed out - sitting at lip of hole (count as looking out of hole)
30.50. Reentering hole.
36.10. Climbed out again - still at lip.
38.35. ♂ leaves.

♀ 41.10. ♀435 entered.
46.20. Looking out.
47.35. Leaves.

49.06. ♂298 enters
58.50. Looking out.
0.10. Leaves.
5905. climbs out - at lip.

16.25. ♂298 leaves
19.15. looking out
26.05 Looking out
000. Still noone in hole
1925. Back down
26.45. Leaves

♀ 12.10. ♀435 enters - but looks out right away
1218. leaves
don't know when this bird arrived!

26.00. ♂ in hole looking out
27.05. Looking out.
30.00. Me leaving
2655. Back down
27.50. Leaves. is ♂298

Total time watched: 150 min.

| | ♀435 | ♂297 | ♂298 | Total |
|---|---|---|---|---|
| Time incubating | 15.20 | 0 | 35.24 | 50.44 |
| Time looking out | 5.43 | 0 | 9.20 | 15.03 |
| Total time in hole | 21.03 | 0 | 44.44 | 65.47 |
| # visits to hole | 3 | 0 | 4 | 7 |

## 18 May 1400-1630 Nestwatch (incubation)

0.00. No one in hole (bird flushed from lip on arrival)
16.10. ♂297 at hole.
16.50. ♂297 in hole.
22.45 Looking out.
27.30. " "
3.00. " "
2325. Back down
28.45. " "
4.20. Leaves hole

10.15. ♂297 enters
15.35. Looks out.
19.25. Leaves hole
17.50. Back down.

20.30. ♂298 enters
22.45. Looks out
26.00. " "
29.20. Back down
3.30. Looks out
23.40. " "
26.23. climbs out - at lip.
4.05. Leaves.

24.15. ♂298 enters.
24.30. ♀435 lands at hole
25.30. ♀ still at lip.
27.35. ♀ leaves.
3.10. ♂ looking out
430. Leaves.
4.05. Climbs out.

7.42. ♀435 enters.
12.05. looks out
16.50. " "
13.35. Back down
21.30. Leaves
21.25. ♂297 arrives; ♀ wakes to him before she leaves.

21.50. ♂297 enters.
24.50. Looks out.
3.10. " "
12.50. " "
17.55. " "
20.30. " "
29.00. " "
28.18. Back down
12.30. " "
14.15. " "
20.10. " "
22.07. " "
0.00. ♂ still looking out.
Me leaving.

Total time watched: 150 min

| | ♀435 | ♂297 | ♂298 | Total |
|---|---|---|---|---|
| Time incubating | 7.38 | 40.15 | 17.40 | 65.33 |
| Time looking out | 6.10 | 24.35 | 6.10 | 36.55 |
| Total time in (at) hole | 13.48 | 64.50 | 23.50 | 102.28 |
| # visits. | 1 | 3 | 2 | 6 |

## 19 May 720-1020 Nestwatch (incubation)

0.00. ♀435 in hole - looking out.
5.35. ♀ left hole after waking to ♂298.
5.45. ♂298 enters.
17.35. ♂ leaves
25.10. ♂297 enters.
10.35. ♀ landed at hole.
10.45. ♂ looks out. 1055. ♂ leaves
12.30. ♂297 enters again.
25.40. looks out
2.10. " "
26.35. Back down
2.17. Leaves.
3.35. ♂298 enters.
18.50. looks out.
19.25. Leaves.
19.55. ♀435 enters hole.
0.00.
1.35. ♀ looks out.
2.55. Leaves.
2.20. Back down.
8.00. ♂297 enters.
0.00.
6.00. Leaves
6.20. ♂298 enters.
14.50. Looks out.
22.35. ♀ lands at hole.
23.10. ♂ leaves.
16.35. Back down
23.13. ♀435 enters
0.00.
0.50. Leaves.
6.30. ♂298 enters.
11.25. ♂297 lands at hole.
11.30. ♂298 leaves. ♂297 chattered at ♂298 as this exchange took place ♂298 did not chatter at all.
11.35. ♂297 sits at lip. Leaves w/o ent
17.25. ♀435 enters.
0.00. ♀ still in.
Me leaving.

Total time watched: 180 min

| | ♀435 | ♂297 | ♂298 | Total |
|---|---|---|---|---|
| Time incubating | 38.02 | 62.20 | 47.10 | 147.32 |
| Time look. out | .45 | 1.12 | 2.20 | 4.17 |
| Total time in hole | 38.47 | 63.32 | 49.30 | 151.49 |
| # visits | 3 (♀ at beginning & end counted as ONE) | 3 | 4 | 10 |

## Melanerpes formicivorus

1500 Hastings Reservation

27 June 1030. Checked stores, but they are clearly out or very nearly so as I could only find 2 that looked intact.

Also, the '78 nest hole appears to have been or is being appropriated by a hive of Honey Bees.

11 July 1155. Both j492 and j493 in the remains of the willow granary at Pump. No sign of the adults here, however.

15 September 910. Noone seen here in passing.

9 October 1015. Watching.

1035. ① j♂ M or I Wh #492 in trees along creek, 8m down from trough. Also here are ② ♂ Wh, L #298, ③ j♂ LB/LB #493, ④ ♂ DB, L #297. The 2 adult ♂♂ are together; both juvs still have ♂-plumage and are almost certainly ♂♂.

1045. ~~① ♂ Wh~~ ⑤ ♀ M/ -wh or -wh # 435 here also. All 5 accounted for. All are in the Valley Oak here "in" 1800's territory. Meanwhile, there are some other birds further down the creek as well as some activity up at 1800 itself.

1050. Leaving to watch at 1800.

28 October 1130. Counted stores: Tree 1: 264, Tree 2: 825 } 1089

Getting there, but still lots of space here.

6 November 1205. ①♂298, ②♂493, plus 2-3 others harvesting acorns near and apparently storing in 1800's old nest tree on the other side of the knoll. This area is clearly still now part of 1500 after all.

9 November 1400. Walking by here I noticed that the large horizontal limb of Tree 2 here has fallen - certainly since 28 Oct. and probably within the last 2-3 days. Fortunately, it is propped up partially by the limb below it; thus many of the acorns stored here

# Melanerpes formicivorus

1500 Hastings Reservation

(9 November) should still be accessible (see drawing on back). Nonetheless, the birds have lost probably ~200 holes for sure anyway at the least and probably 150 or so acorns. This is assuming they continue to use the areas that are up off the ground and accessible.

12 December 1505. Watching. ① $\sigma_{LB/LB}$ #493 in Tree 1. ② ♀ M/Yel-Wh #435. ③ $\sigma$ DBRW #297. ④ $\sigma_{M/BlK}$ #492; chased a W-br. Nuthatch from the central storage area.

1530. All but $\sigma$298 set. Going to count stores, etc.

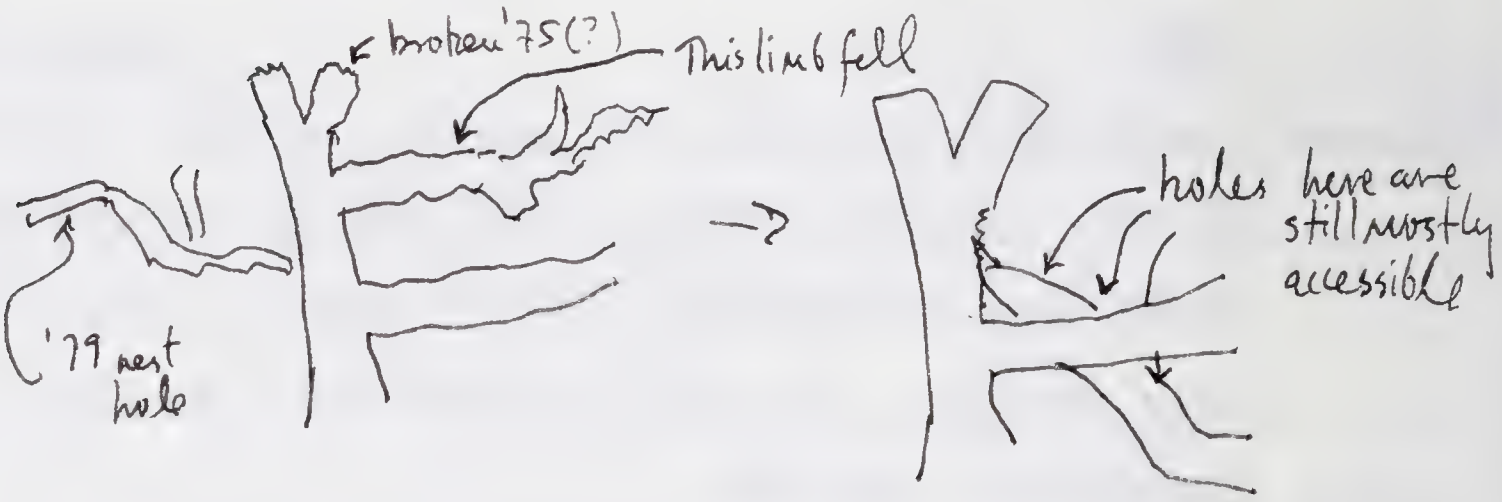
Counted stores: Tree 1: 1230 } 1532
Tree 2: 302 }

The fallen limb at tree 2 is now cleared out of acorns, and apparently has been lost to the birds as far as they're concerned.

I took a sample of 30 acorns from tree 2 and 45 from tree 1 for a total sample of 75 acorns, replacing most of them with ones of my own.

Back on 1 and 2 August 1974 I counted the sections which fell from tree 2 and came up with an estimated 1151 holes. The maximum number of acorns stored in that limb during the 1974-75 winter was 631 (28 Nov 74), but following the apparent loss of a few minor limbs the maximum was 455 (27 Feb. 75). The number of acorns lost between the 28 Oct. count and 12 Dec (79) count in tree 2 was 523. Thus, I estimate * the birds lost 500 storage holes with the loss of this limb.

9 November
Lost limb in Tree 2 at 1500




This limb took with it an est. 500 storage holes (see 12 Dec.)

Lost is the end parts of the limb inc. a couple small dead limbs; etc.

# Melanerpes formicivorus

1800 Hastings Reservation

21 January 1230. Watching.

1320. Finally: 3(!) birds together: ① ♂ Blk/Grn #476, ② ♀ Wh/Blk Wh/M #260, and ③ ♂ Lgt-Blk/Light #347 (previously thought to be defunkt). Don't know where this bird has been since last spring, but he is clearly here now (at least there are 3 birds here and he is the likeliest candidate for the 3rd).

1330. Leaving.

12 March 1045. Watching. Two ♂♂ up in the main tree: ① ♂ Lgt-Dk/Lgt M/Lgt #347 and ② ♂ Blk/LG? #476.

1140. May have been a ♀ here briefly.

1245. No good sign of the ♀, even though I did end up with reasonable looks of the 2 ♂♂. It would be sad if she's gone. Counted stores: 7. These birds are pretty well out.

27 March Two birds were flushed by Ron from the #78 nest hole this evening.

12 April 1300 Some of the far-off Carricking I heard up at School Hill is from here - someone is upset in the Main tree and there are a bunch of birds around (note also ♀260's appearance [or move] up at School Hill - see SHill notes).

1304. Somebody getting chased in Main Tree (more Carricks) ♂ LG-Yel #298 from 1500 in 1800 "nest tree", away from main action.

1308. A ♀ (ub?) is doing the ~~♂♂~~ chasing over there. Meanwhile, there's a ♀ with the 1500 ♂♂ over here: ♀ M/LP-Yel Yel-Blk/Yel-Wht #435. ♂ Or-Yel/OG #297 here also. Meanwhile some real fighting in the nest tree - I'm moving over to there.

1320. ① ♀ ub here Carricking; probably another also. There are at least 2 ♀♀ here.

# Melanerpes formicivorus

1800 Hastings Reservation

(12 April) ♂ here also

1324 ③♀ wh/DBlue wh/M #260! Back here after all defending her spot. ③♂ Blk/Lg #476, eating catkins. ♀260 now feeding on catkins also.

1330. Things quiet now. The intruding ub ♀ has apparently left for now.

1340. I thought there was a 2nd ♂ here but now I'm no longer sure.

1350. That 2nd ♂ may not be here, but in any case the main excitement is over and I'll let him show himself later on. ♀260 lives and is apparently planning on staying here, at any rate.

21 April ♀260 apparently really moved/moving to School Hill. See School Hill notes.

24 April 920. 2 birds were here at dusk (possibly both ♂♂), but only one roosted in the '78 nest hole (as far as I could tell, but a mistake is possible).

29 April 920. Watching.

1000. Leaving. Birds up the hill but not here.

Purge: ♀260. Last seen here (and at School Hill) on 12 April. ♀ at School Hill first seen on 10 April, not present on 27 March → Moved - watched group on (School Hill) 3 April ± 1 week.

30 May 830. Checked the hole in the Main tree, which has 3 eggs. During this process there was a fair amount of activity - wakes, occasional Carricks, Drumming, and a few good fights. I finally got a chance to watch between 830-900.

(go to P. 4)

1979 Walter D. Koenig

# Melanerpes formicivorus

Hastings Reservation

1800 Nest Record

30 May 800

Opened hole: 3 eggs

① 26.0 × 19.0

② 25.0 × 18.8

③ 25.2 × 19.0

5 June 1900

Nothing in hole; nest failed. (probably prior to hatching - see notes).

# Melanerpes formicivorus

1800 Hastings Reservation

(30 May) Most of the activity was taking place in and around the old "nest" tree, which they have finally reclaimed, apparently, from 1500 (the 1500 birds were here, however, but only in the trees on the knoll side of the 1800 nest tree). I wasn't able to watch very long, but I nonetheless identified 4 birds for sure (there may have been more, but I noticed no others): ① ♀ub; presumably the breeding ♀ here; this bird was doing most of the chasing. The bird she was chasing was ② DB-WH/DB DP/M #193 - the ♀ who bred last year here with ♀260 and who I last saw last July! Amazing! Meanwhile, both the ♂♂ were here - ③ ♂ /LG #476 and ④ ♂ LP-DB/LP M/LP-DB #347, the latter of which has clearly been involved in some shenanigans himself. They appeared to still be amicable and I noted no chasing between themselves or of/by them and the other birds. Altogether quite a cache of interesting birds!

1415. Passed by here again; all quiet this time and noone in the nest hole.

2 June 930. Noone in the nest hole. I bet this nest has failed.

5 June 1900. I finally made it up to the nest, and as I'd suspected there was nothing in it. There was also no sign of any birds in the area while I did all this.

2 July With the additions of Ron's observations here in the last several weeks, I make the following changes:

1) ♀ub. This bird, presumably the one who bred here (see Nancy's notes for further details), moved here apparently

# Melanerpes formicivorus

1800 Hastings Reservation

(2 July) between 27 March and 12 April, by which time she was chasing after old ♀260 possibly as though she belonged here. She then apparently left directly after the return of ♀193 and the demise of her nest on about 31 May → Moved here ~4 April, Left group about 31 May.

♀193. Definitely not here until the proceedings on 30 May → Returned here ~1 June.

♂347. A continual problem. He's obviously spent a fair amount of time during the last year elsewhere (with ♀193?), but shows up here now and again. Still with no better information, I leave him here for now.

Further note on ♀ub above: Ron Mumme obtained a good watch on ♀ub and ♂476 on 11 May, at which time they were hanging out together almost continuously. Nancy also saw an ub ♀ here on 19 May. Thus she would definitely appear to have been the breeding ♀ here as well as the only resident ♀ up until ♀193's odd, unorthodox return ~1 June.

15 September 900. Noone in any holes here and noone seen in passing.

9 October 1100. Watching. ♂ in spring nest hole when I arrived. Many stores here. ♀ DB-LP/DB #193 Or/M here preening in Main tree.

1115. ♂ MarBlk/LG #476 atop tree now.

1130. The 2 birds sitting together here; no sign of anyone else.

1145. Leaving for now. ! 3 birds flushed from the tree when I left; thus ♂347 is almost surely still here after all.

6 November 1215. Watching. See 1500 notes re the old nest tree granary

Melanerpes formicivorus

1800 Hastings Reservation

(6 November) here, which is being used by the 1500 birds (still).

1225. ① ♀ or/M #193 with acorn.

1240. ② ♂ Blk/LG #476 here now.

1315. Counting stores. Still the 3rd bird remains elusive!

Main tree: 563

13 November 955. Watching. 2 birds sitting in main tree. ① ♂ Blk/LG #476; ② ♀ DB/M #193.

1013. Finally: ③ ♂ M/:-: #347. Can't see his upper band well but is definitely ♂ M/. Here preening. Me leaving.

13 December 1440. Counted stores: 727, all in the main tree. Still no sign that these birds are interested in using the old nest tree.

1450. Watching.

1520. There were 2 birds here when I arrived but noone seems interested in returning. Going to get my acorn sample.

I managed to get a sample of 50 acorns from the granary and replace them with ones of my own.

1979 Walter D. Koenig

# Melanerpes formicivorus

Haystack-Blomquist Hastings Reservation

2 January Collected a sample of 50 acorns from here, replacing them with a comparable number of my own.

22 January 1530. Watching.

1540. ①♂ Or/Blk #173 Or/M here sapsucking.

1545. Both ♀♀ showed: ②♀ Yel/Blk #176 and ③♀ wh-BP/Or #247. The latter came first and landed on the trunk; the former then came and landed in the tree being greeted by both the others. Then ♀176 flew to the trunk just above ♀247 and gave several submissive "chattering" calls, just like a baby. Subsequently ♀247 began preening while ♀176 flew off. Thus, as I expected, ♀247 > ♀176 - there is a dominance heirarchy between ♀♀ within the group.

1600. Very good. Leaving. All 3 here and sapsucking is in progress.

10 February 1435. Counted stores: 616. Not too bad, considering.

17 February 1330. ♂ Or/M #173 seen here in passing. Also ②♀ Yel/Blk #176 flushed from over by Soto Springs.

25 March 1030. A ♀ (unbanded, I believe) is here Karrit-cutting, and even giving an occasional Garrick. ♂ Or/M #173 here also, but not chasing the ♀. No immediate sign of the other ♀♀.

1050. ♂ eating oak buds and also hawked a big black insect

1245. Counted stores: 316. ♂ still in the area, no sign of ♀♀.

26 March Ron watched for 2 hours today and again saw only ♂173 - and no sign of the ♀♀ (!).

1 April 1705. ♂ Or/M #173 in soap tree. 1715. Leaving. No sign of anyone else.

12 April 1645. There are stores remaining here. No sign of any birds, though.

23 April 1615. Still some stores here. ①♂ Or/M #173 here. Flew to greet a 2nd

# Melanerpes formicivorus

Haystack-Blomquist Hastings Reservation

(23 April) bird - a ♀! ♀[M]? ??. Both birds flew to nest tree - ♂ to hole, which he entered for 10 seconds and then left. ♀ sat nearby, then began eating catkins. Both stayed here for several minutes. ♀'s legs could not be seen well but she appeared not to be either of the ♀♀ that are supposed to be here. Also, this is the closest thing that's happened yet anywhere to suggest that there might be a nesting attempt eventually this year.

26 April 1700. Watching, but noone in the vicinity.

1730. Leaving. Nothing at the moment.

1740. Still here - and all of a sudden excitement! ♂[Or/Blk #173] here with a ♀: ♀[B Pink-Yel/Black / Red-Wh/LBlue? 484] ? Seen well (esp. R leg). Several other birds here - all in Live Oaks above 1800 (across from Nest tree) eating catkins and ?sapsucking? ♂[Or/M] Or RW #307 from L. Hay here also, not getting chased as far as I can tell (♂307 and ♂173 are, of course, brothers). Possibly a couple others here also, but no chasing or broo-ha-ha.

♀ above is ♀484 from Gazebo. I wonder what she's up to?

29 April Purge: ♀247. Last seen 22 Jan., gone by 25 March → Disappeared about 23 February ± 1 month.

♀176. Last seen 17 February, gone by 25 March → Disappeared about 7 March ± 2 weeks.

Add: ♀484. Seen by Larry Hanks at Gazebo on 12 April, here by 26 April → Moved as adult here on 19 April 1979 (±1 week).

10 May 1440. This group is functionally out of acorns: ○.

# Melanerpes formicivorus

Haystack-Blomquist Hastings Reservation

12 May 1700. There is at least one intruder, a ♀, getting chased by 2 other birds in the granary area.

16 May 1700. Nobody seen in any of the holes or in passing.

18 May 1650. Since I haven't seen any birds in the old nest hole for months now, I opened it up to check it out of pure curiosity this afternoon. The verdict is that it appears fine: there was a little clutter of pieces of bark and so forth at the bottom but there were no obvious residents or other obstructions to its use by the Wickers. However, I was intrigued by the fauna that I pulled out with each small handful of bottom debris, including a pillbug or two and especially lots of bird-lice (Mallophagians I suspect) similar, as far as I could tell, to those which infest my birds and their babies.

2 June 915. Noone in any of the known holes here or seen in passing.

6 June 1700. " " " " " " " " " " " "

10 June 1450. No stores left here as far as I can tell. Also noone seen in passing.

20 June 1645. After sitting here for 45 min. in an attempt to nail some Starlings I finally heard a call and saw one AW sitting in one of the trees just down from the granary.

21 June 1925. In passing I saw a ♀ here and ♂ or I/M #173. Both are apparently still here and well.

27 June 1015. Flushed a bird from a Live Oak (apparently sapsucking) in the Buckeye forest over on Blomquist

3 September 1600. Noone in any holes here.

22 September 745. Watching. At least 2 birds in the area.

# Melanerpes formicivorus

Haystack-Blomquist — Hastings Reservation

(22 September) 750. 2 birds here: 1♂ and 1♀. 3rd bird, an intruder, flew down to them but was immediately shagged out.

800. ⊙♂ Or/Blk # 173

807. Both now in granary: ②♀ BP-?/Blk # 484 and ♂ 173.

810. That's it. Both birds here; no sign of a nest. There are, however, a few stores (<25) in the granary already. The birds are doing some storing here already.

12 October 900. No birds in any holes here; also no birds seen. This group has lots of stores, though: 807.

13 November 1052. ♂ Or/Blk # 173 sitting in V0 perch tree. Lots of stores here.

14 December 1530. Counted stores: 2530. The granary here is truly stuffed, perhaps exceeding the glorious winter of 74-75 even. These birds have really done well. They even have a few acorns in the fallen limb.

I also got a sample of 75 acorns from the tree and replaced them with my own. I saw no birds coming or going.

1540. As I was leaving I noted ①♂ Or/M # 173 sitting over in one of the standard perch areas.

1543. ♀ here also, but left before I could get any bands.

# Melanerpes formicivorus

Lower Haystack — Hastings Reservation

2 January — Counted stores: 652. I also took a sample of 25 acorns (all of which appeared to be in marginal shape at best) and replaced them with a set of good acorns.

4 February — 1510. Watching.

1610. No sign of anybody. Pulling their old disappearing act, apparently.

10 February — 1450. Watching. Checked the sap area but found no sign of birds or active sap holes.

1455. Just found them: ①♂ OrRW #307 sapsucking over in a tree by the knoll. A long way from here but I'll watch for the other before moving anywhere.

1520. ♂307 definitely by himself down there. Leaving for now to check stores and the sap tree.

Counted stores: 548. Holding in there quite well!

17 February — 1515. Watching. ①♂307 sapsucking in the Blue Oak.

1530. ♂307 still in sap tree. No sign of anyone else here. ♂390 would definitely appear to be gone.

13 March — Parge: ♂390. Last seen 11 December 1978, gone by 10 Feb., → Disappeared about 10 January 1979 ± 1 Month.

25 March — 1100. ♂OrRW #307 here in the Valley Oak above the granary. Also, something may be going on here.

1110. A 2nd ♂, banded but with no WS, landed here with a beetle and was displaced by ♂307. ♂307 then chased him over to the granary, where they were joined by a 3rd bird, a ♀ juv, while the odd ♂ was still being displaced.

1116. ♀ here calls regularly, looks at home. Is unfortunately unbanded, I fear.

## Melanerpes formicivorus

Lower Haystack — Hastings Reservation

(25 March) 1120. Now ♀ub is still here and ♂307 has returned and is busy chasing an ub ♂.

1125. ♀ is busy Waka ing to everybody and generally acting quite new and happy to be here. ♂ub is in 2° tree. Now ♂ub flew back to main tree, which is being vigorously defended by ♂307. ♀ub greets both, however.

1130. More chasing. ♂ub gives chatters just prior to being chased by ♂307, but to no avail. ♂ub being quite persistent, really.

1140. Intruder ♂ still here, but keeping his distance. ♀ looks set. No sign of any other group "members".

Counted stores: 154. ♀ still here, calling, almost oblivious of us. ♀ hawking (got one of those large black Carabid beetles [ ]).

♀ is sitting in the Valley Oak granary above us, gives occasional Garricks (Urrks?) and Karrit-cuts. Could be because of us, but I think not. No other ♀♀ here. She is aware of ♂307 over on the knoll, and these could just be signals to him. But these Garricks ~~would~~ should potentially attract other intruders - and why would that be to her advantage? She is the only ♀ "contesting" for this spot at the moment. Why should she advertise it? Possibly this has to do with the ♂ who's being chased? Very odd. Quite a few Garricks.

26 March Ron came by here today and didn't see the ♂ at all, but did notice the unbanded ♀. Also (on 25 March actually) Ron noted 1 bird (only) roosting in the hole in the main granary.

# Melanerpes formicivorus

Lower Haystack — Hastings Reservation

1 April 1720. ♀ub in granary Karrit-cutting and even giving a Cearrick or two, but noone seems to be responding.

1728. For the last 3 minutes I kept track of how many displays the ♀ made. Only 2 were given, Karrit and a full Karrit-cut (with only 2 Karrit-cut-cuts)

The count:

| | min 1 | min 2 | min 3 | Total |
|---|---|---|---|---|
| Karrit | 20 | 21 | 17 | 58 |
| Karrit-cut | 4 | 2 | 8 | 14 |

And still no sign of the ♂, who has conceivably bit the dust since his fight on 25 March (but no other new ♂ here yet either).

12 April Add: ♀ub here: Not here 17 Feb., acting quite new on 25 March ⇒ Moved here (age unknown) ~~[illegible]~~ about 20 March.

1630. There appear, to the best that I am able to discern, to be essentially no stores remaining here (there are a very few "whole" acorns, but not more than 5 that look as though they might in fact be edible).

1634. Poof! ♀ appeared here, saw me and got scared, flew to '77 nest hole and went in for safety. In a few days I'll get her at that hole!

No ♂ offhand.

1636. Take that back - ♀ flew to sap tree, wherein sits ♂ OrRW #307. Good!

13 April 1900. One bird roosted in the Granary (where an ambush is ready) and it did not appear to have a wing streamer. No sign of the second bird, however.

# Melanerpes formicivorus

Lower Haystack — Hastings Reservation

14 April — 500. Ambush failed. 500 is too late - 445 is about right (or earlier) already.

1900. Nobody roosted here this time. Back to square 0.

23 April — 1645. ♂307 in sap tree. Several minutes later a ♀ was in this area also (though not in the sap tree itself). Noone in any holes, however.

26 April — ♂307 over at Hay-Blom.

7 May — 1845. 2 birds in the '77 nest hole - presumably denoting where these birds are now roosting.

16 May — 1715. Nobody seen here in any of the holes or elsewhere.

26 May — 1600. Checked the '77 nest hole, where Nancy had seen a bird looking out of the hole, but there was nothing inside.

2 June — 910. 1 bird flew in from the chapparal area on the Big Creek side of the hill while I was walking around here, but otherwise I didn't see anyone and there was noone in any of the known holes.

6 June — 1700. Noone in any holes here or seen in passing.

10 June — 1500. Opened the hole in the Granary, where Nancy saw a bird again recently, but nothing.

Also, there are no stores here as far as I can tell.

18 June — 1450. On the advice of Nancy I checked the hole in the granary once again, this time flushing out the ♀ and finding 4 eggs.

20 June — 1650.!. Holy cow! Upon coming to the hole I flushed out ♂ M/LB-WN #461 - one of last year's babies I wrote off last summer long before he even molted! Sometimes I wonder whether I in fact have the faintest idea what's really going on with these birds.

(go to p.6).

# Melanerpes formicivorus

## Lower Haystack Nest Record

26 May - 10 June

18 June 1450

20 June 1700

23 June PM - 24 June AM

27 June 1000

## Hastings Reservation

Birds seen at this hole now and again but no nest. See notes

Opened hole: 4 eggs, opaque

① 22.0×17.3 (Dirty) (did not hatch)

② 27.7×20.2 (Clean)

③ 25.7×19.8 ( " )

④ 25.5×20.1 (Almost clean)

Still 4 eggs.

Babies hatched.

Checked hole: egg ① had not hatched but was fertile and contained a 10mm embryo. 3 babies were present, but one was dead.

| | ① Banded | ② | ③ |
|---|---|---|---|
| 27 June 1000 (wt) | 18.2 | 7.9 | 3.5 (dead) (a ♀ - see notes) |
| 13 July 1800 (wt W2) | 82.5 ~~55~~ | 72.1 33 | |
| 18 July 1730 | 78.5 82 | 73.5 60 | |

## Melanerpes formicivorus

Lower Haystack — Hastings Reservation

(20 June) 1700. In the nest, meanwhile, are still 4 eggs.

21 June 2000. Watched here at dusk, where there was an incredible amount of activity (compared to everywhere else these days) involving all 3 birds. As for the hole itself, ♂461 came to it briefly (this bird, by the way, has a noticeably higher-pitched karrit than the other ♂) but soon left; later, ♂307 (or RW) came and roosted in the hole, more or less as expected.

23 June Watched here from 730-1030. see compilation on back.

Once again, ♂307 roosted in the nest tonight; both the other birds entered the hole after 1930 but left prior to ♂307's entrance.

Also, ♂461 chattered submissively/subordinately at one point when he left the hole while ♂307 was at the lip.

24 June Watched here from 830-1130; compilation is on the back. The babies have hatched here - most trips were with food.

This evening, while Larry watched the nest tree, I went over and saw both unwing-streamered birds roost in the '75 nest hole. Thus, by elimination, ♂307 again spent the night in the nest.

During the watch today, ♂307 appeared to only have a metal band on his left leg.

27 June 1000. Checked the hole, where there was one unhatched (but fertile) egg, 2 live babies, and one recently departed baby.

I brought the baby home and opened her up, determining that she had been a ♀.

23 June 730-1030 Nestwatch (incubation)

0.00. Noone here.
5.00. Plain Titmouse checks hole.

♀ [
- 9.35. ♀ub entered
- 14.30. ♂461 at hole.
- 15.30. ♀ leaves. ♂ wakas at her

[
- 15.40. ♂461 enters.
- ~~0.15~~.
- 30.00 (0.00)
- 0.15. ♂ leaves

♀ [
- 0.20. ♀ub enters, ♀ wakad at ♂461
- 55.00. Intruder here. ♂307 chasing.
- 55.15. ♀ leaves. ♂307 at hole, but doesn't enter

[
- 2.50. ♂461 enters.
- 10.55. Leaves.

♀ [
- 11.00. ♀ub enters.
- 33.30. L.O. (looks out)
- 33.40. Leaves

♂307 [
- 38~~3~~5. ♂307 enters.
- 50.45. Leaves

♀ [
- 50.55. ♀ub enters.
- 56.45. Leaves.

[
- 56.50. ♂461 enters
- 5.20. L.O.
- 5.28. Back down.
- 7.00. L.O.
- 7.05. B.D.
- 16.35. Leaves

♀ [
- 16.40. ♀ub enters
- 30.00 Me leaving

Total time watched: 180 Min

| | ♀ub | ♂307 | ♂461 | Total |
|---|---|---|---|---|
| Time incubating | 102.30 | 12.10 | 42.12 | 156.52 |
| Time looking out | .10 | 0 | .13 | .23 |
| Total time in hole | 102.40 | 12.10 | 42.25 | 157.15 |
| # visits. | 5 | 1 | 3 | 9 |

24 June 830-1130 Nestwatch (1st day feeding)

♀ [
- 0.00. (♀ in hole)
- 15.55. ♀ leaves at hole
- 16.00. ♂307 ~~enters~~. No vocalization between the 2 birds

♂307 [
- 17.45. ♂307 enters.
- 23.10. Leaves

30.00 (0.00)
6.00. ♂ub intruding here. ♂307 chasing him.

♀ [
- 15.45. ♀ub enters.
- 18.15. ♂461 at hole. wakas. ♀ doesn't look out. ♂ finally leaves.
- 31.50. ♀ leaves

[
- 32.00. ♂461 enters. [This bird has darkish eyes]
- 34.00. ♀ at hole. This time ♂ doesn't come out.
- 34.30 ♀ leaves. w/o entering
- 34.50. ♀ enters
- 35.05. ♂ leaves

♀ [
- 42.30. ♀ leaves.

♂307 [
- 42.40. ♂307 enters (bolus of ②)
- 52.05. leaves

[
- 52.10. ♂461 enters ②. Soft wakas only in exchange.
- 53.20. ♂461 climbs out of hole; reworks some of his food.

[
- 54.20. ♂461 re enters ①
- 55.30. ♀ at hole.
- 55.30. ♂ looks out
- 55.50. Leaves

♀ [
- 55.55. ♀ enters ②
- 59.00. ♂307 at lip of hole.
- 59.45. ♀ leaves

♂307 [
- 59.52. ♂307 enters. ①
- 16.30. Leaves

♀ [
- 16.40. ♀ enters ②
- 55.45. Leaves

56.10. ♂307 at hole but leaves w/o entering

♀ [
- 7.45. ♀ enters ②
- 30.00. Me leaving

Total time watched: 180 min

| | ♀ub | ♂307 | ♂461 | Total |
|---|---|---|---|---|
| Time "incubating" | 104.50 | 31.28 | 6.25 | 141.43 |
| Time looking out | 0 | 0 | .20 | .20 |
| Total in hole | 104.50 | 31.28 | 5.45 | 142.03 |
| # visits | 5 | 3 | 3 | 11 |
| x bolus size (N) | 2 (3) | 1 (1) | 1.5 (2) | 1.7 (6) |

# Melanerpes formicivorus

Lower Haystack — Hastings Reservation

2 July — Add: ♂461. First seen on 20 June; possibly here as early as 25 March, but apparently only 2 birds here as late as 7 May → Returned here ~ 29 May.

11 July — Ambushed this morning at the '75 nest hole, coming up with ♂461 only. Thus, he did not spend the night in the nest. I do not know for sure whether the ♀ was here or not, however.

940. Ambush set up at the nest waiting for the ♀.

1100. Gave up after 2 near misses. If I can get the damn trap to shut she's definitely catchable, at least.

13 July — 1815. After another frustrating attempt at engineering the capture of the ♀ I went in and weighed the babies.

14 July — 745. Up and waiting again with yet another setup to catch the ♀.

1000. My contraption will definitely work, but for now the ♀ is a little too sceptical to go in the nest. Leaving.

18 July — ~~1755~~ 1730. Banded and fledged the 2 babies, who are now #511 and 512.

19 July — 745. After a short wait this morning I nabbed the ♀ in the nest hole without further ado. She had an Earwig in her bill when I pulled her out. I banded her (♀515) and fledged her at last, ending a continuing odyssey which began months ago at least!

1900. Checked and fed the babies, who were hungry but o.k.

26 July — 1800. On the advice of Nancy who's been worried about the smaller baby I went up to the nest and discovered that, indeed, he had not fledged. His remains were gushy but already totally disarticulated after only ~5 days or less (see Nancy's notes

## Melanerpes formicivorus

Lower Haystack — Hastings Reservation

(26 July) for a fledging date here). Apparently a distinctly younger chick is at a marked disadvantage after all. In any case, I found a few color bands and there is no doubt that he was #512. I cleared out the remains as best I could.

22 September 815. Watching.

819. Intruding (?) ♀ DG-Or/DG-Or, M/DG-Or (DG or DB) #478 plus 2nd bird j:♀? LP/LG #496 Both together and quiet, looking over the granary. [Both these birds are from Blomone]

823. Finally ① ♀ DG/Yel #515 discovered them.

824. Both intruders flew off back toward Blomone.

832. Apparently an intruding adult ♂ here also (♂M, ?), just confronted by ♂Or #307.

900. 3 birds now over in the saddle: ♂307, ♀, and ③ jWh-/WhM #511.

901. ♂ub just flew into granary and is investigating it.

905. I think I had ? M/Gpt #461 (?) here preening. Still watching.

920. 2 ub birds (both ♂♂, I think) in the Woods up here on the hill. Seem to head off towards the valley when they leave or get displaced by the residents.

935. Leaving. It would appear that everyone is here, but I do need a better look at ♂461.

945. There are 2+ birds - not LHay birds, I think - over in the far field over beyond the '75 nest tree. They're harvesting acorns in the Valley Oaks over here.

955. Noone in any holes here and no sign of any stored acorns as yet.

12 October 830. Checked all the holes here, but no sign of life anywhere, even in the granary. Things were very quiet in the area.

## Melanerpes formicivorus

Lower Haystack — Hastings Reservation

(12 October) I also counted stores, which were conspicuously on the low side:

| | | |
|---|---|---|
| Main Tree: | 59 | 59 |
| Other: | 0 | |

920. Found several of these birds in the forest just up from Soto Springs over on Hay-Blom territory. Seen were ① ♀ Black/Light #515, also ② ♂ DB-wh/LB-wh #461.

923. I just heard some wakas from the pond itself - evidently they are actually going down there to drink! ③ ♂ M/or-wh #307.

926. ④ j ♂ wh-Reddish/M #511 (still clearly ♂-type; dark eye).

That's the whole group. Leaving.

13 November 1045. Counted stores:

| | | |
|---|---|---|
| Main tree: | 1736 | 1859 |
| 2° tree: | 123 | |

Now they're finally getting somewhere.

14 December 1400. Counted stores:

| | | |
|---|---|---|
| Main tree | 2012 | 2142 |
| 2° tree: | 130 | |

I also swiped a good sample of 105 acorns, mainly from the Main tree, and replaced them with those of my own choosing.

No birds seen while I was here.

# Melanerpes formicivorus

Blanone — Hastings Reservation

4 January 1445. Watching from hide.

1530. This doesn't appear to be the day for this - leaving.

6 January 1200. Watching.

1235. ① ♂ DB/DB-Y(n) # 479 here eating an acorn plus 2nd ♂.

1345. ② ♂ LP M/DK-Red # 301.

1350. ♀ here briefly. Both ♂♂ here now.

1400. Leaving. I need a better watch still but it certainly seems likely that there are only the 3 birds here.

17 February There are some (but not a lot) of acorns remaining here - probably ~300 or less.

1 April A bird is in the '78 nest hole, possibly roosting early at 1750.

12 April 1600. Noone in any holes this time; noone for sure seen in passing. This group is also out of stores, along with most everyone else.

19 April 1715. Nobody here in/out of holes in passing. However, upon close examination of several dead limbs it seemed as though there may be a few (and only a few) stores remaining here after all.

20 April Purge: j437. Last seen (by Pam) on 7 July 1978 → Not seen here after ~~7 July~~ 7 July (group not watched until winter, really).

27 April 1725. ♂ in '78 nest hole. Finally - a nest?

1726. Flushed the ♂ out - a 2nd bird - a ♀ - here also. Looks bad for the nest theory, at least for now.

7 May 1600. Flushed 2 birds out of the '78 nest hole on this gloomy afternoon.

9 May 1150. ♂479 at the edge of the hole. Something may be up here.

# Melanerpes formicivorus

Blomore — Hastings Reservation

10 May 1600. Checked the hole, which has 3 fresh eggs in it! Finally something is up.

Also, as far as I can tell there are a few stored acorns left here; at least there are a few intact ones (~~no~~ though possibly rotten) left in the granary. Certainly not enough to last much longer, however.

11 May Watched here 635-900. Only ♂479 incubated all morning (Larry watched 900-1200). Also, there is unfortunately some doubt as to whether or not ♂301 exists any more - thus possibly there is but ~~1~~ a pair here. See back for compilation.

1700. Opened nest - still 3 eggs.

This evening Ron and Larry reported 2 birds roosting in the nest - either there are 2 ♂♂ here or... the ♀ spent the night in the nest, too!

12 May 1930. Two birds definitely roosted in the nest hole tonight, much as Ron and Larry reported last night.

13 May Watched here from 1600-1815. Only 2 birds, ♂479 and a banded ♀, (♀M, #478), were seen. It would appear that the ♀ is spending the night in the nest! See back for today's compilation.

16 May 1800. Bird in hole.

18 May 720. Watching nest.

~~1920. Left (prematurely) when I shot a starling here~~

L. 17.00. Left (prematurely) when I shot a starling here!

- 20.00. Begin. ♀478 in nest.
- L 22.30. ♀ leaves.
- 22.30, ♂479 enters hole
- 26.25. Looks out.
- L 34.10. Leaves hole.
- 35.25. ♀478 enters hole (Bands seen well)
- 6.00, looking out 12.05. Back down

39.00. ♂ sub intruder here now; ♂479 also.

41.40. ♀ sub here investigating the granary also!

4230. ♀ sub got displaced by ♀478.

0.00. Leaving. Noone back yet.

Total time watched: 100 min

| | ♀478 | ♂479 | Total |
|---|---|---|---|
| Time in cub. | 38.00 | ~~6.05~~ 3.55 | ~~44.05~~ 41.55 |
| Time in hole out | 6.05 | 7.45 | 13.50 |
| Time in nest | 44.05 | 11.40 | 55.45 |
| # visits | 2 | 1 | 3 |

(go to p. 4)

## 11 May 635-900 Nest watch (incubation)

0.00. Watching. Noone in nest.
0.00. Still nothing.

| | | |
|---|---|---|
| 2.15. ♂479 in | | |
| 5.15. Looking out. | 545. Back in. | |
| 6.20 " " | 8.00. " " | |
| 11.45 " " | 1230 " " | |
| 1645 " " | 1910 " " | |
| 1920. " " | 1925. " " | |
| 2115. " " | 2120. Left the hole. | |
| 705. ♂479 in. | | |
| 900. Looking out. | 950. Back in. | |
| 1240. " " | 1335. " " | |
| 1640. " " | 1850. Leaving. | |

Total time watched:
139 minutes

0.00. Nothing.

| | | |
|---|---|---|
| 1940. ♂479 in hole - don't know when he arrived. | | |
| 1940. Looking out. | 2025. Back in | |
| 2410. " " | 2455. " " | |
| 2750 " " | 2815 " " | |
| 010 " " | 030 " " | |
| 445. " " | 510. Leaving hole. | |

1900. Leaving. Noone in hole.

| | Time in hole (incubating) | Time looking out | Total time in hole | # visits |
|---|---|---|---|---|
| Total: ♂479 | 34.15 | 12.05 | 46.20 | 3 |
| (minutes, seconds) ♀ | 0 | 0 | 0 | 0 |

## 13 May 1600-1815 Nest watch (incubation)

| | | |
|---|---|---|
| 0.00. ♀[478] in hole. | (M on left leg) | |
| 17.40. Looked out | 17.45. Back down. | |
| 19.30. " " | 20.05. " " | |
| ♀478 2.00. " " | 2.10 " " | |
| 3.05. " " | 5.30. " " | |
| 12.40. " " | 13.05 " " | |
| 17.10. " " | 17.48 " " | |
| 18.40. Left hole. | | |
| 23.35. ♂479 at hole. | | |
| 23.40. Went in. | | |
| 25.00. Looked out. | 25.42. " " | |
| 27.40 " " | 28.00 " " | |
| 2.10 " " | 3.10 " " | |
| 3.25 " " | 4.40 " " | |
| 4.50. " " | 5.20 " " | |
| 6.05. " " | 8.00 " " | |
| 9.45. " " | 10.28. " " | |
| 13.05 " " | 13.35 " " | |
| 14.15 " " | 1455 " " | |
| 1820 " " | ~~2125~~ 23.20. " " | |
| 26.55 " " | 0.33 " " | |
| 3.05 " " | 3.40 " " | |
| 430 " " | 530. " " | |
| 10.25 " " | 1920 " " | |
| 19.40. " " | 2055. " " | |
| 2425. " " | 2625. Left hole. | |

1500. Noone returned yet.

Total time watched:
135 minutes

Totals

| | ♂478 | ♀479 | Total |
|---|---|---|---|
| Time incubating | 32.47 | 44.22 | 77.09 |
| Time looking out | 29.58 | 4.18 | 34.16 |
| Total time in " hole | 62.45 | 48.40 | 111.25 |
| # visits | 1 | 1 | 2 |

# Melanerpes formicivorus

## Blomore Nest Record — Hastings Reservation

7 May 1600 — 2 birds in hole

9 May 1150 — ♂ at edge of hole

10 May 1600 — Hole opened; 3 fresh eggs numbered 1-3.

11 May 1700 — Still same 3 eggs:
① 24.1 × 19.0
② 24.3 × 19.4
③ 24.9 × 19.1

24 May 1715 — 3 babies

| | | | #494 ① Red-DB | #495 ② Or-Brn | ③ #496 |
|---|---|---|---|---|---|
| 2→ | 24 May | 1715 | 10.7 | 10.8 | 10.1 |
| 4 | 26 May | 1500 | 21.0 | 17.8 | 15.6 |
| | 27 May | 1545 | All 3 ok. | | |
| | 13 June | 1600 (wt wt) | 78.0 84 | 77.5 87 | 77.8 84 |

Not as developed as other 2

# Melanerpes formicivorus

Blomore — Hastings Reservation

(18 May) 900. Leaving. Still no sign of ♂301, who is most likely gone. Note the unbanded intruders (1♂ and 1♀) seen at 39.00-41.40.

24 May 1715. Checked the nest, where all 3 babies have hatched.

26 May 1500. Checked the babies, who were all fine until I removed a band from ①Red-DB and mucked up the skin on his leg. I think it will all heal o.k., but it's something to keep in mind in case he unaccountably disappears.

27 May 1545. Checked the babies, who are all doing fine (the wound I inflicted in Red-DB is obvious but healing just fine!)

2 June Watched the nest here from 700-830, seeing only ♀478. There was no definite sign of there being 2 ♂♂ here, in any case. The nest was being attended.

13 June 1600. Bled and banded the 3 babies, all of whom are fine, almost identical in weight and wing length, and now #494, 495, and 496.

There are no stores remaining here as far as I can tell.

The cut sections below the nest hole were crawling with lice. I also found several on the babies, mostly in and around the rump area.

23 June 1140. Passed by here, but didn't see or hear anybody.

24 June 1330. Saw several birds in the area here, but was unable to identify any.

2 July Purge: ~~[illegible]~~ ♂301. Last seen 6 January, gone at least by about 27 April → Dis. about 2 March ± 1 month

23 July 1540. Flushed j494 from the Live Oak sap tree by the road.

3 September 1610. Noone in any holes here.

22 September Both ♀478 and j496 seen together at Lower Haystack. Latter apparently molting to ♀. See LHay notes.

# Melanerpes formicivorus

## Blomone — Hastings Reservation

(22 September) 1020. Over at Blomone itself, a ♂ was in the spring nesthole and wouldn't come out until I heaved a stick up at him. I did not hear anything inside, but it would no doubt be worth keeping an eye out over here.

24 September 1640. Noone in the hole this time around.

11 October 1310. Flushed 3 birds from the area, but noone in any holes. Also no sounds from inside, and there are lots of stores here already.

12 October 1115. Watched here for 20 min seeing/hearing several birds (none identified), but noting no sign of a nest.

# Melanerpes formicivorus

Gazebo — Hastings Reservation

22 January 1600. Flushed 1 ♂ ub, 1 ♀ ub, plus a 3rd bird from here. At least there is still a group here.

1605. Walked down and flushed a 4th bird from the '77 nest hole - where this group is ripe for ambushing, I would say.

24 January 630. My ambush mostly failed, but I did at least get 1 bird (out of 3 in the hole and ≥4 in the group), an adult ♂, now #480.

16 February Flushed 4 birds from the area in passing this afternoon.

13 March At dusk, 4 birds were definitely here. However, just as it was getting dark, one flew off to a big oak nearby while the others (after some spirited Karit-cutting in response to a Great-horned Owl that flew into a nearby tree) all roosted in the hole I was ready for. I then walked over to where I'd seen the 4th bird go and actually flushed him, but he merely flew off elsewhere rather than show any inclination to join the others.

14 March 600. This time I was a success, getting all 3 of the birds. This included ♂480 as well as 2 adult (= non-first-year) ♀♀, now ♀484 and ♀485. All were processed and released by about 645.

12 April 1600. No stores here anymore. Nobody flushed on our arrival, but we did here some calls nearby and I left Larry here to see what he could find.

19 April 1700. Nobody seen in passing.

26 April ♀484 seen up at Haystack-Blomquist. See Hay-Blom notes.

29 April Purge: ♀484. Moved to watched group (Hay-Blom) on 19 April ± 1 week (see Haystack-Blomquist notes).

# Melanerpes formicivorus

Gazebo — Hastings Reservation

16 May 1745. I saw at least 2 birds here, inc. a banded ♀ apparently not ♀485, but I was not able to determine anything definite. In any case, there was noone in any of the holes (including a new one I discovered). However, there were birds in the area.

18 May 940. These birds continue to baffle me. This time I again saw 2 birds, at least one of whom was banded: ♂? Yel-Blk/Yel-Blk ?? (not ♂480). Noone in any holes.

2 June 900. Noone in any of the holes here.

6 June 1600. " " " " " " " .

23 June 1130. Flushed a bird from the '78 nest hole - from which young baby rasps were coming! Serves me right for ignoring these guys for 2½ wks!

1700. Opened hole: 3 babies; 2 healthy and 1 looking in poor shape.

1720. Watching from up the hill.

1825. Nobody's been to the nest yet, but there is ①♂ ub preening, etc., over in a Valley Oak by the dirt road.

1833. Now over in the same area: ②♀ Mauve/Blk-Wh(y) #485.

1845. Leaving. Not an overwhelming success, but the birds who are supposed to be here (with the exception of ♂480) appear to be those who actually are here.

24 June 1145. Watching hole. A bird left it as (when) I arrived.

1208. Leaving the hole: ①♂ ub.

1213. ♂ ub at the hole again. 2nd bird in the vicinity.

1225. ②♀ Blk-Wh(y) #485 in granary area. Possibly a 3rd bird here also.

1245. Leaving. Still no clear sign of ♂480 or other 3rd bird.

1 July 1030. Checked the nest, where the 2 healthy babies are fine. No sign of the 3rd.

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# Melanerpes formicivorus

## Gazebo Nest Record

23 June 1700

## Hastings Reservation

Hole opened: 3 babies plus some egg shells.

| | | #509 ① BP-Wh(u) | #510 ② JP-Red | ③ |
|---|---|---|---|---|
| | 23 June 1700 | 15.4 | 16.3 | 3.0 |
| | 1 July 1030 (wt^WL) | 46.4 [20] | 48.1 [21.5] | gone |
| See notes | 11 July 1115 | 79.6 [62] | 82.3 [65] | |
| See notes. | 14 July 1030 | 82.3 [80] | 81.8 [84] | |

## Melanerpes formicivorus

Gazebo — Hastings Reservation

11 July 1115. Went up to the nest expecting the babies to be bandable but instead they're still a little on the young side so I just measured them. However, they were both covered with scabs that appeared to be dried sores, probably not wounds. They are possibly the result of parasites. ① had many small scabs especially on her back, head, and wings (dorsal). ② was ~~also~~ slightly worse with even more scabs and dried blood on the back and a large glob of dried blood cementing her red crown feathers together just above the white. Strange. I did not notice any lice running around on them, though there was one on the cut wood of the nest hole when I opened it. I've never seen any scars this extensive on babies I've banded previously.

14 July 1030. Banded and bled the babies, both of whom are fine (though the crown of ② [#510] is still quite a mess, with some crown feathers "glued" together and others missing altogether so as to create a patchy crown). They are now #509 and 510.

19 July 950. Watched here at dusk, noting that

① there are definitely 3 birds here (all 3 were seen together pre-roost mounting); I don't know who the 3rd bird is but I'd best find out soon.

② Noone roosted in the nest tree as far as I could tell; rather they roosted somewhere over toward Corral Viejo Canyon a short ways.

③ there is no obvious indication that the nest is still extant - another item to look into as soon as possible.

1955. I spoke too soon. Just as I finished 2 birds began karrit-cutting near me, at least in part in

# Melanerpes formicivorus

Gazebo Hastings Reservation

(19 July) response to a Barn Owl in the area. After some fuss one of them did roost in the nest hole while the other flew down by me toward the former roost area.

20 July 500. The ambush went successfully, netting me the unbanded ♂, as I expected. (The ambush was done at the nest hole). He was banded and bled, and is now ♂516.

Ron watched here later on and cleared up the mystery of the 3rd bird: he's another unbanded ♂! This will clearly call for some reorganizing in this group. Plus it means that there is work yet to be done here!

24 July Having found a hole in a tree down the road slightly from the nest tree where birds were roosting, I ambushed this morning. I'd seen 2 birds go in but when the time came I ended up with 3 - the ♂ I caught on 20 July plus 2 (count them: 1, 2) unbanded ♂♂. Both these birds were adults, I think. Both were also bled and banded as ♂517 and ♂518.

This new plethora of unbanded ♂♂ calls into question what in fact has gone on here since I first caught the birds late last winter. The 2 major options are ① the unbanded ♂ remaining from my ambushes persists, is one of the 3 ♂♂ I've just banded, and at some point probably prior to the nest was joined by 2 new, unbanded ♂♂; ② ♂480 and the unbanded ♂ from last winter disappeared and were replaced, again prior to the breeding season, by a set of 3 new ♂♂. My preference here is for the latter scenario; of course, with no way to prove things one way or the other I will ostensibly follow the more conservative (but less likely) route ① in my banding records.

Though no decent observations of the ♂♂ had been made

## Melanerpes formicivorus

Gazebo — Hastings Reservation

(24 July) here since I ambushed in March, I will follow the following scenario in the records:

1) ♂ unbanded #1. Present the whole time (see above, however); banded 20 July → #516.

2) ♂♂ unbanded #2 and 3. Not present 14 March for sure; probably not present 13 April when Larry saw 2 ♂♂ here only (plus the 2 banded ♀♀). Strange activity here between 25 April and 18 May (Carricks, unbanded birds, strange banded birds - see my notes and those of L. Hanks) reasonably may be inferred to be the period of ♂♂ turnover here. (Certainly this occurred by early June when they began their nest). → Moved here (age unknown) 6 May ± 2wks.

The 3rd unbanded ♂ probably moved here with them at that time rather than being the same one here previously.

3) ♂480. Caught 14 March. Probably here 13 April. Apparently died during the interval of confusion here (possibly along with the unbanded ♂ - see above) → Disappeared abt 30 April ± 2wks.

22 September 1000. Passing by, I flushed 1 bird out of the granary and a Turkey out of the area. Up in the perch tree along the road are 2 birds sitting peacefully, ①♂ub (!) [Note: Ron saw an apparently settled unbanded ♂ here a few weeks ago also]. 2nd bird is ①♂ LP / #517.

1010. There's something odd about that unbanded bird. He has a yellowish eye and the crown is very scruffy and darkish in front - almost as though "he" were a 1st-yr ♀ only now molting.

11 October 1315. No sign of any one over here in passing. Some stores present.

12 October 935. As I appeared out above the nest tree several

# Melanerpes formicivorus

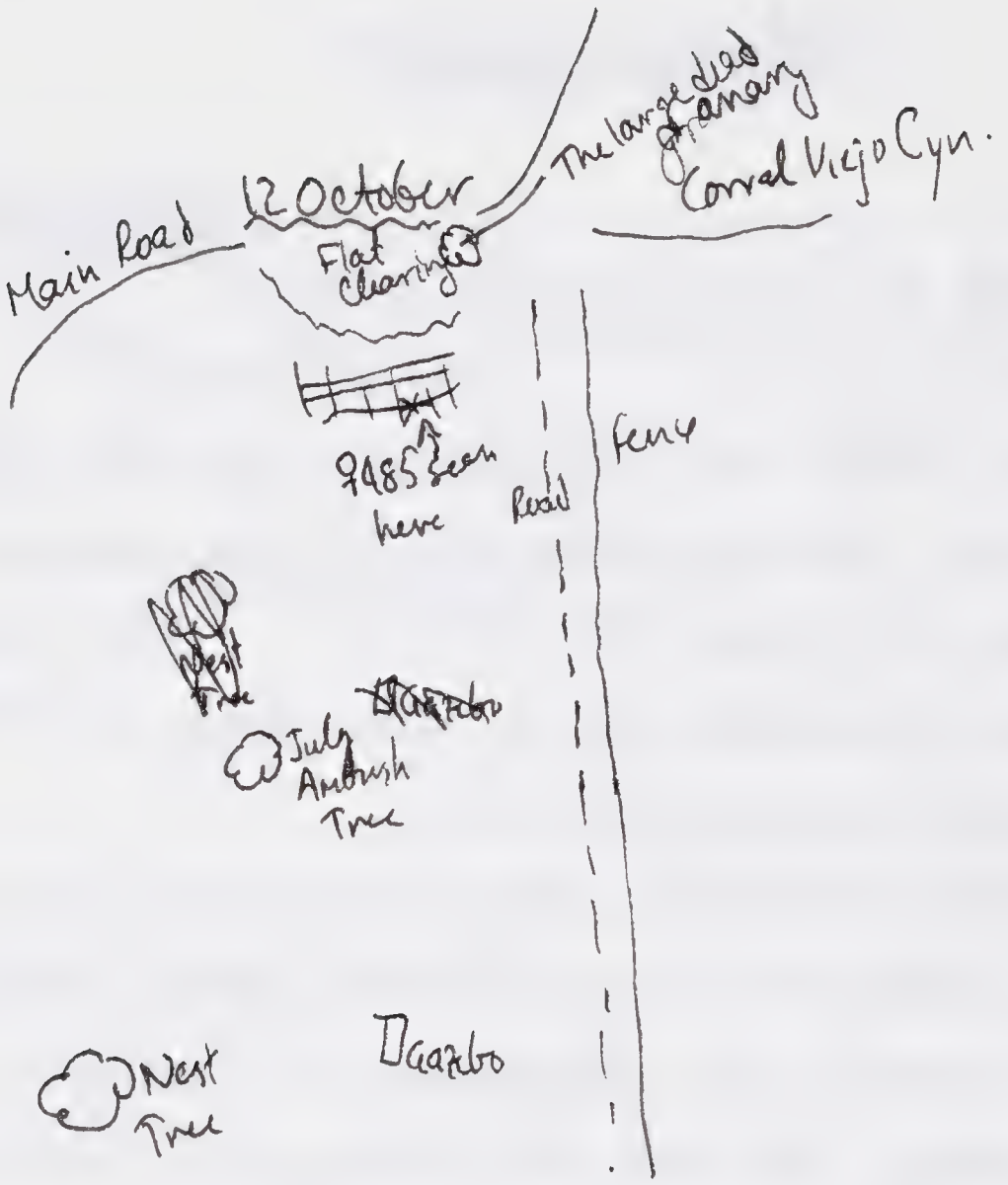
Gazebo — Hastings Reservation

(12 October) birds appeared in it's top from nowhere: ① j → ♀ M/Lg-Dg #509 (molting to ♀), ② ♀ Or-wh/Or-wh #510, ③ ♂ LP/LB #517.

955. Down at the far end of the territory, just above the flat containing that large dead granary you can see from the road, I flushed ④ ♀ Maroon/Blk-Wh(n) #485. There also appeared to be other birds in this vicinity, and even possibly beyond (see map on back).

I proceeded to watch the large dead granary for a short spell, just to make sure it is a different group. And it definitely seemed to be. There was a lot of activity in the tree among 5-6 birds, all storing, etc. But noone that I saw (4+ birds) was banded. It's too bad this group isn't on or at least closer to the Reservation; it's big, active, and easy to watch.

13 November 1100. Four birds present in the nest tree as I approached, eating acorns (the birds, not me): ① ♀ Yel-Wh/Yel-Wh #510, ② ♀ Maroon/Blk-Wh(n) #485, ③ ♀ M/DK Lg-Dg/Yel #509, and an adult ♂.


Main Road
12 October
Flat Clearing
The large dead Canary
Corral Vigo Cyn.
Fence
Road
1485 seen here
West Tree
July Ambush Tree
Gazebo
West Tree

# Melanerpes formicivorus

## Westgate

## Hastings Reservation

19 January Counted stores: Gatetree: 0 } 350.
Weate: 350 }

One bird flushed in the process.

21 January 1050. Watching.

1115. ①♂or-wh/m #258.

1130. ♂258 here hawking in Gate sycamore. Noone else here.

1145. There are at least 2 birds far up on the chaparral slope, one perching on a dead Adenostoma.

1150. Leaving. Doesn't seem to be the day for this group.

1200. Down by Hallisey's is ②♂M/Blk-#466. Flew up to that dead Adenostoma bush.

6 February ♂258 seen in Gate sycamore in passing.

9 February 1635. ♂D Da/Lg-Da #467 flushed from the top hole in the Willow nest tree.

15 February 1200. Watching.

1230. Wandered around as well as sitting for a spell with only 1 brief look at a ♂ in the Coate sycamore.

25 February Ron watched here yesterday and today, and I watched for an hour or so in the late afternoon, all seeing about the same set of 4 birds sapsucking near the Weate sycamore: ♂58, ♂ub, ♂258, and ♀ub. No sign of any babies (!) Ron saw lots of dominance-subordinance interactions (see his notes); I particularly noted ♂258 being constantly submissive (giving Chatter calls) in the presence of ♂58. Very few stores remain here - but I did note a few apparently intact ones. Also I watched at dusk, but didn't see anybody roost in the willow or the Gate

# Melanerpes formicivorus

Westgate Hastings Reservation

(25 February) and have no idea where they did roost.

4 March 1130. Counted stores: 21. Meanwhile, 2 birds were over in the sap tree next door.

13 March Purge: ♂394. Last seen 6 August 1978 (for the first time in a long time), gone by 26 October → Dis. abt. 16 Sept. ± 1 Month

♂395. Last seen 24 November 1978, gone by 2 December → Dis. abt. 28 November 1978.

2 April 930. Over on the fenceposts across from Maggie's are ① ♂ $^{LG/LG}_{M}$ #58, a 2nd ♂, and a ♀.

945. ♂58 now sapsucking in the tree by Westgate.

1005. ♂58 still here, but noone else. Leaving.

12 April Purge: ♂238 and ♂465, last seen 2 December 1978, gone by 25 Feb. for sure → Dis. about 13 Jan. 1979 ± 1 month.

14 April 1200. ♀ub hawking from WGate Sycamore.

20 April 1845. 1 bird was in a hole in the WGate sycamore when I arrived, but he flushed and disappeared, after which I saw nor heard anyone else roost anywhere at dusk. Where are these birds going? I especially checked the WGate tree and found no evidence of anyone roosting there except for the initial presence of the one bird.

21 April 1030-1100. Several birds at School Hill West quite probably this group. See SHWest notes.

1800. ♂ub sitting in Gate sycamore.

25 April 750. ♂ub preening atop WGate sycamore. Some wakas, but I didn't see anyone else in passing.

26 April Purge: ♂466. Last seen 21 Jan., gone by 25 February, → Disappeared about 7 Feb. ± 2 weeks

# Melanerpes formicivorus

Westgate — Hastings Reservation

(26 April) Also Purge: ♂467. Last seen 9 February, gone by 25 February, → Disappeared about 17 Feb. ± 1 week.
Ron noted 3 birds (at least) roosting in the high hole up in the Westgate sycamore tonight.

4 May 920. ♂ub hawking atop the Gate sycamore.

6 May 1730. Bird in hole in WGate sycamore.

17 May The birds have been hanging around here, especially the WGate tree, but noone has been in any of the holes lately.

28 May 1700. 4 birds were here in the Gate sycamore making some racket.

9 June 1650. Bird in the nice hole in the Gate sycamore!

10 June 1420. Noone in the hole this time around.

2 July Purge: ♂258. Last seen 25 February, gone by 2 April
→ Disappeared about 15 March ± 2 weeks.

11 September 1700. Bird in hole in Gate Sycamore. A nest??

12 September 1500. Checked hole with mirror. The bottom was very hard to see, but I was fairly confident it was empty.

15 September 850. Noone in the Gate tree.

8 November 1440. ♂ no leg #58 eating an acorn atop WGate sycamore.
1400. Atop the Gate sycamore are ① ♂ LG/LG No leg #58 and ② ♀ub.

Counted stores: Gate syc: 0
WGate syc: ~~478~~ 478 } 478.

18 December 1215. Counted stores: Gate syc: 0
WGate syc: 1095 } 1095.
The Gate tree remains unused while the WGate tree is stuffed. I also saw ① ♂ub while over counting at the WGate sycamore.

26 December 1300. Took a sample of 50 acorns out of the WGate granary and replaced them with ones of my own.

# Melanerpes formicivorus

Westgate Hastings Reservation

28 December 955. On my way up to the Arnold, I stopped here when I noted some unusual activity around. ~~Here~~ The moment I got out of the truck I counted 7-8 birds in flight, chasing and so forth - the clear signs of a Revolution. So I stopped long enough to try and see what was up. In the Gate sycamore (primarily) were 3 birds, quite chummy with each other: ① ♂ no leg #58, ② ♂ ub, and ③ ♀ Blk-Yel/Blk Blk-Yel/M #519 - the ♀ from Valhalla (!). The ♀ was being especially solicitous, just as a potential immigrant tends to be.

By the time I got these 3 birds the activity seemed somewhat subdued, so I checked over at the Wgate area. In the Wgate sycamore was one unbanded ♀ with a slightly dark eye who hung out there the entire time I watched and even chased away some Dickey birds from the storage areas. Meanwhile there was some more chasing in the area between the sycamores; one additional bird I identified was another unbanded ♀.

I derived no other relevant information after this point and so left shortly thereafter. The cogent facts seemed to be as follows: ① ♀ ub has disappeared, #519 appears to be 1st in line to replace her. ② A minor revolution involving ~5 intruders is attending this event. ③ An ub ♀ has meanwhile taken over the WG sycamore while the 3 residents are spending most of their time over in the Gate tree. Why this should be when all the stores are over at the Wgate tree is beyond me.

1520. Passed by on the way back down - there is still some chasing and activity here.

# Melanerpes formicivorus

Westgate Hastings Reservation

29 December 1000. Still considerable activity here. ♂ub, ♂58, and ♀519 still all hanging together in the Geate Sycamore; twice, however, ♂58 was over in the Weate tree eating an acorn (♀ub with dark eye is still in Weate tree also). During the 2nd of these times another ♂ was with ♀519 and ♂ub in the Geate tree. This other ♂ begged a lot, was chased by ♂ub at least once, and may have been banded, but I couldn't tell for sure. At one point, after sitting in the Geate tree for a stretch, he flew off up the canyon.

1340. 2 ub ♂♂ sitting near each other in the perches over by the Willow nest tree. ♂58 seen in Weate tree. These birds are hanging out some in the Live Oaks by the Willow nest tree where they are a still harvesting acorns.

31 December 1715. 3 birds roosted in the willow tonight where I'm ready to ambush tomorrow morning (my New Year's party).

# Melanerpes formicivorus

Road 1 Hastings Reservation

10 January It was too dark to count stores but I was able to get a sample of 26 acorns from the main granary.

19 January Counted stores: Main tree: 912 } 1097
Misc.: 185 }

Doing very well - they still have enough such that they are relatively hard to count.

5 February 1050. Watching from hide.
1110. ①♂ DBRW #222.
1128. ②♂ Or/DB-Yel #294. ③♂ Wh/DG Wh/M #183.
1301. ④♀ Red/ #295. (?) Nobody coming to the granary - birds mostly hawking by or across the road when here at all.
1303. ⑤♀ M/Or-LG #293. Seen well.
1340. Leaving. These birds are being pretty scarce - I don't really know what they're up to. Obviously several have disappeared from October, however.

9 February 1545. ♂222 in sycamore by the road.
1550. ♂222 and ②♂ Wh/Blk #183 on other side.
1551. ③♂ Or/DB-Wh #294 plus 2 others up on side of PO Hill now.
1605. A ♀ here: ♀ M/ ; presumably ♀293 but I haven't been able to see any other bands yet. Possibly sapsucking up there.

11 February Purge: ♀354, ♂406, ♂407, ♀409. All last seen 4 Oct. 1978, gone by 11 December 1978 (when Ron Watched: Disappeared about 7 November ± 1 month.

4 March 1130. Counted stores: Main tree: 810 } 824
Others: 14 }

I didn't see anybody while I was here.

13 April Stores remain here; also several birds - see Larry Hanks' notes.

# Melanerpes formicivorus

Road 1 — Hastings Reservation

23 April 1030. I'm over at Finch but can identify ♂Maroon/Blk #183 preening over in the granary here.

See Finch notes concerning ♀293, who seems to really have moved over there. Note, however, that if this is the case, this group is now left without a ♀.

25 April 1545. Seems quiet here at the moment.

1645. Still quiet. Counted stores: 103. Getting near the end.

29 April Range: ♀295. Last seen on 5 February (and none too well - last seen well on 11 December 1978); gone by 13 April (see L. Hanks notes) → Disappeared about 10 March ± 1 month.

No - see below (30 April) Probably here all (3 May)

♂222. Last seen 9 February, gone by 13 April (L. Hanks notes) → Disappeared about 12 March ± 1 month.

No - see 3 May below

♀293 continues to be a problem in her waffling between here and Finch; thus I will leave her here for now.

questionable - Larry may have been mistaking ♀444 for ♀295 (3 May)

30 April Larry reports seeing ♀295 here today - she's here after all!

3 May Big doings here - chasing, fighting, etc. Larry's been watching for awhile, at 1150 we put nets up in the granary and are now watching.

1150. ~~♀295 and~~ ① ♀ DB-wh(n)/wh ♀ M/wh-DB #269 from R3. Also ② ♀ DB-wh(n)/Or #444 from R3.

1200. Caught ♀269. ③ ♂ unb.

1215. A lot of activity, but probably not more than 8 birds here total.

# Melanerpes formicivorus

Road 1 — Hastings Reservation.

(3 May) 1220. ♂ wh-LP/Maure? Chasing ♀444. Possibly ♂222. Yes, I believe so. Yes - ④♂222 here for sure - wing-streamer gone.

1230. Larry has gone over to watch at Finch, where there is a lot of activity also. I'm now watching from the hide.

1232. ♀444 and ♀269 are close, and avidly greeting ♂ub. There is a 3rd ♀ here, however (at least some).

1238. ♀269 drumming in granary.

1245. Caught ♂ub (now #486) - I think this is the unbanded ♂ here (he got caught when he chased ♀444 after they were all sitting peacefully in the granary).

1310. Watching again. (♂486 released).

1320. There are at least 2♂♂ here; one is ♂486.

1330. ♂222 here again.

1333. There is an ⑤unbanded ♀ cutting in the Valley Oak just up from the hide. ♂486 is again aggressive towards ♀444 (but not ♀269). Also up in the VO above the hide is ⑥♂Or/DB-Yel #294. Have yet to see this bird in the granary (nor ♂183).

1340. ♂294 just landed in the granary. Some Carricks from up above me. Finally ⑦Maure/m #183 with ♂486 in Sycamore by the road.

1355. The remaining chasing, etc., is pretty much going on in the VO above the hide now. Otherwise the action is primarily greetings among the 2♀♀ and R1 ♂♂.

1400. Leaving; nets still up for now.

4 May 1215. Still lots of activity here - ♀269 seen. Birds still quite active and involved in some chasing.

# Melanerpes formicivorus

## Road 1 — Hastings Reservation

5 May 630. Watching. Still lots of activity here. ①♀ DB-Wh(n)/Or #444 preening in granary. ② Joined by ②♀ Brwn(n)/Wh #269. Looks like these 2 ♀♀ are here for good.

640. ♀♀ are actively greeting each other. They are the only birds here in the granary regularly; others are in the vicinity.

650. ③♂ Wh-Red/Dg #222 and ④♂ Yel/Wh-Or #486; one of them again displaced one of the ♀♀ (444?). ⑤♂ Or/Blue-Wh #294.

655. ♂486 is displacing ♀444.

705. The ♂♂, it appears, are spending much of their time in the forest above the granary (roughly in the direction of Valhalla). I don't know what the attraction is up there, however.

706. ⑥♀ub in the VO up above the granary (still-♀ub seen here 2 days ago also). There is also apparently additional activity somewhere up above Valhalla somewhere.

712. The unbanded ♀ is sapsucking in the tree up here. She seems to be pretty much on her own. She keeps harrit ing and displaying, but few other birds are landing here or staying any length of time.

715. Leaving.

6 May 1400. Several birds are by the sycamores along the creek where the holes are.

1415. ①♀ M/Wh-DB #269. ♂ here also. ♀ showing interest in the holes here. ②♀444 here also.

1430. ♀444 investigating the same hole now.

11 May 955. At least 2 birds, including a ♀, in the sycamore hole area. However - note that ♀269 is down at R3 (see R3 notes!)

15 May 1415. At the lip of a hole in the sycamore is ♀269 - inside is a 2nd ♀, but at that point Billy Clow drove by and I missed who it was. Something's up!

# Melanerpes formicivorus

Road 1 Hastings Reservation

16 May 825. Several Ganicks and some activity over here - things don't appear to be entirely settled yet.

835. ①♂M/DB-Or #486 seen here (apparently leaf gleaning, though he may have been after cathins) along with ②♀269 (in granary).

23 May 1130. Somebody here is just sitting and Garricking. Things are still unsettled here. Watching.

1136. ①♀(WH/DB-WH(N)#269. ②♂ Or-WH/Or #486 chasing someone. ③♀DB-WH(N)/Or #444. This last bird is still getting displaced by ♂486: this may yet be the root of the problems here.

1148. ♀444 just gave 2 loud Garricks while sitting alone atop the Sycamore perch tree. Furthermore, ♀444 seems to be here in the granary only when the others are scared off.

1150. ♀444 Drumming in the granary.

1153. ④♂ Or/DB-WH #294. Also an interaction between the 2 ♀♀, who are both in the granary. ♀269 > ♀444, who begged submissively in her presence. But ♀269 does still tolerate ♀444's presence for sure.

1155. Leaving. Still things happening here!

1 June 1400. On my way to the Valhalla tree (where Larry saw a bird in a hole this morning) I flushed a bird out of a hole in the Sycamore by Finch creek. In the Valhalla area were several birds and at least one of the holes is in good shape, but there are no eggs as yet.

1430. Bird in the Sycamore hole again! Arghh!

1900. And again! This time a ♂!

2 June 1800. Noone in the Sycamore this time. Whew!

# Melanerpes formicivorus

Road 1 Hastings Reservation

3 June 750. Bird in the hole in the sycamore again.

1830. Mustering previously unheard of levels of fortitude, bravery, cunning, and foolhardiness, I managed to get up to the hole this evening with the help of Larry, the 16' step ladder, and the 40' extension ladder. (see back). This amazing feat yielded the information that these birds have 4 eggs - apparently the product of only 1 ♀.

4 June Watched the nest here from 730-1030, noting ♂486, ♂294, but mostly ♀269. See compilation on back.

1045. Some Garricks and activity over by the granary. Watching. ① ♀ Yel-Blk/Yel ♀ Yel-Blk/M #383 (a "R3 ♀"). Several birds here. ②♂486 greeting ③♀269. ♀269 above ♀383 on the limb here but not chasing her. I don't actually know who is instigating the broo-ha-ha here, unless it's ♀383 plus maybe 1 or 2 other of the R3 ♀♀.

1100. Focus of activity has shifted. I'm leaving.

5 June Watched the hole here from 1100-1400. See compilation on back.

6 June Watched the hole from 900-1200. Both ♂♂ showed up and did something today! Compilation follows:

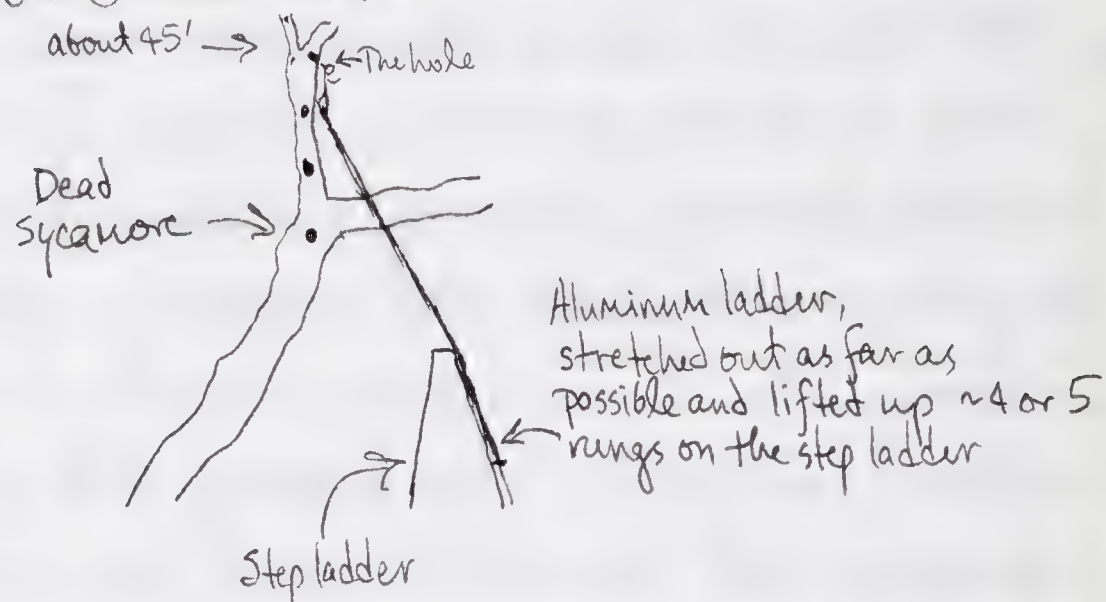
♀
- 0.00. ♀269 looking out.
- 1.00. Back down
- 10.40. Looks out. 10.55. Climbs out

♀
- 21.45. ♀269 enters
- 31.30. Looks out.
- 32.40. Back down.
- 42.45. Looks out.
- 43.05. Leaves
  - 44.15. ♂486 at hole; ♂294 above him. ♂486 moves up (to greet ♂294?)
  - 44.50. ♂294 enters.
  - 45.50. Looks out
  - 48.50. Back down
  - 55.45. Looks out.
  - 57.05. Back down.
  - 2.25. Looks out
- 3.20 Leaves
- 8.50. ♀269 at hole w/ food (inc a Cicada); flew off. Ate food.

♀
- 9.00. ♀269 entered w/o food.
- 16.30. ♂486 at hole. Leaves w/o entering.
- 17.05. ♀ looks out.
- 17.25. Climbs out. Preens at nest lip.
- 19.40. Reenters hole.
- 44.15. Looks out.
- 44.30. Leaves. Climbs out

(go to P. 8)

## The Road I hole


about 45' →
← The hole
Dead sycamore →
Aluminum ladder, stretched out as far as possible and lifted up ~4 or 5 rungs on the step ladder
Step ladder

If properly tied up, this is actually not so bad. The setup is nonetheless not recommended for the beginner, however.

## 4 June 7 ~~8~~30-1030 Nestwatch (incubation)

0.00. Noone in hole.
✓ 16.15. ♂486 enters.
19.40. Looks out.
19.55. Leaves
30.00 (0.00)
✓ 8.15. ♀269 enters.
22.40. ♂294 lands at hole; looks in, but leaves w/o entering.
31.30. Looks out.
31.40. Leaves
✓ 41.40. ♀269 enters.
59.20. Looks out
0.35. Leaves.
✓ 12.15. ♀269 enters.
22.15. Looks out.
22.50. Back down.
27.35. Looks out.
28.05. Leaves.
✓ 36.30. ♀269 enters.
44.45. Looks out
45.20. Leaves
✓ 54.00. ♀269 enters.
1.35. Looks out.
2.05. Leaves
2.15. ♂486 lands at hole but leaves w/o entering.
✓ 28.35. ♀269 enters.
30.00. Me leaving

Total time watched: 180 minutes

| | ♀269 | ♂486 | ♂294 | Total |
|---|---|---|---|---|
| Time incubating | 72.55 | 3.25 | 0 | 76.20 |
| Time looking out | 3.35 | .15 | 0 | 3.50 |
| Total time in hole | 76.30 | 3.40 | 0 | 80.10 |
| # visits | 6 | 1 (2) | 0 (1) | 7 (29) |

(29) # visits to hole w/o entering

## 5 June 1100-1400 Nestwatch (incubation)

0.00. Noone in hole.
16.15. ♂486 enters.
26.50. Looks out. 28.50. Leaves
30.35. ♀269 enters.
38.15. Looks out 40.00. Leaves.
51.45. ♀269 enters.
11.45. Looks out.
12.40. Leaves.
15.05. ♂486 lands at hole, but leaves w/o entering
29.00. ♀269 enters.
40.30. Looks out 42.00. Leaves.
0.00.
0.25. ♀269 enters.
7.35. Looks out. 8.25. Leaves.
16.30. ♂486 enters.
26.15. Looks out.
27.55. Leaves.
59.30. ♀269 enters.
0.00. Me leaving

Total time watched: 180 min

| | ♂486 | ♀269 | Total |
|---|---|---|---|
| Time incubating | 20.20 | 46.50 | 67.10 |
| Time look. out | 3.40 | 5.00 | 8.40 |
| Total in nest | 24.00 | 51.50 | 75.50 |
| # visits | 2 (1) | 5 | 7 (1) |

(1) ↑ at hole but didn't enter

# Melanerpes formicivorus

Road 1 Nest Record

1 June — Bird seen in hole.

3 June 1830 — Hole checked with mirror: 4 eggs

11 June PM - 12 June AM — Eggs hatched.

~18 June — Nest clearly failed. See Larry's notes and Ron's apropos roosting and nest watches.

Hastings Reservation

# Melanerpes formicivorus

## Road 1

## Hastings Reservation

(6 June)

44.45. ♂486 at hole.
45.00. Enters (♂486)
49.25. Looks out
53.50. Back down.
58.30. ♂294 at hole. As ♂486 left this bird chattered for sure.
58.40. ♂486 left
58.45. ♂294 enters
3.15. Leaves
♀ 3.30. ♀269 enters. Gave nice spread-wing wake to ♂
14.15 Leaves
14.30. ♂486 enters. ♂ did spread-wing wake to ♀.
16.55. Looks out
20.15. Leaves.
♀† 40.25. ♀269 enters.
0.00. Me leaving

Total time watched: 180 min

| | ♀269 | ♂486 | ♂294 | Total |
|---|---|---|---|---|
| Time incubating | 92.30 | 11.40 | 17.45 | 121.55 |
| Time looking out | 5.35 | 7.45 | 5.15 | 18.35 |
| Total in hole | 98.05 | 19.25 | 23.00 | 140.30 |
| # visits | 5 | 2(1) | 2 | 9(1) |

8 June Watched the nest from 1430-1730 today. See compilation on back.
9 June " " " " 730-1030 today. " " " " "

Something in the way of intruders ~~was~~ was providing some activity even as far down as the nest, but I wasn't able to observe much besides one definite chase.

11 June Watched here from 745-1030. Compilation is below.

0.00. No one in hole
♀ 6.30. ♀269 enters.
8.00. L.O. (looking out)
9.25. B.D. (back down)
15.00. (0.00)
9.55. ♂486 at hole
10.00. ♀ L.O.; ♂ hopped up limb.
10.20. ♀ leaves.
10.55. ♂486 enters.
13.45. L.O.
15.10. leaves
15.15. ♂294 enters; chattered as ♂486 left.
17.15. L.O. 28.45. Leaves
♀ 28.50. ♀269 enters; spread-wing wake to the ♂
38.30. L.O. 38.45. Leaves.
♀ 48.35. ♀269 enters
59.00. L.O. at nest entrance 0.20. Climbs out - 1.25. Leaves.
♀ 15.50. ♀269 enter.
21.45. L.O. 22.35. Leaves.
23.25. ♂486 at hole, leaves w/o entering.
♂ 32.30. ♂486 enters. 40.25. leaves
38.50. L.O.
♀ 11.15. ♀269 enters.
13.50. L.O. 15.00. Climbs out and leaves.
30.00. No one has returned. Me leaving

Total time Watched: 165 min.

| | ♀269 | ♂486 | ♂294 | Total |
|---|---|---|---|---|
| Time incubating | 45.40 | 9.10 | 2.00 | 56.50 |
| Time look out | 6.25 | 3,00 | 11.30 | 20.55 |
| Total in hole | 52.05 | 12.10 | 13.30 | 77.45 |
| # visits | 5 | 2 | 1 | 8 |

8 June 1430-1730 Nestwatch (incubation)

✓♀ L 0.00. ♀269 looking out. 0.40 Leaves

① 14.25. ♂486 enters.
30.00. (0.00)
4.00. Looks out. 6.05. Leaves.

✓♀ 6.40. ♀269 enters
13.05. Looks out 14.30. Back down.
16.30. " " 16.50. Leaves.

② 22.30. ♂486 enters.
33.05. Looks out.
33.52. Leaves

✓♀ 41.10. ♀269 enters.
49.50. Looks out. 50.10. Climbs out

✓♂294 55.20. ♂294 enters.
55.40. Looks out.
3.25. Leaves.

① 6.50. ♂486 enters.
17.35. Looks out
18.35. Leaves

✓♀ 23.50. ♀269 enters.
34.50. Looks out. 36.30. Back down.
40.40 " " 40.55. Climbs out.

① 53.50. ♂486 enters
1.30. Looks out
5.50. " "
6.45. Leaves 2.40. Back down.

① 14.05. ♂486 enters.
20.35. Looks out. 21.50. Leaves.

✓♀ 25.35. ♀269 enters.
30.00. Me leaving

Total time watched: 180 min

| | ♀269 | ♂486 | ♂294 | Total |
|---|---|---|---|---|
| Time incubating | 36.40 | 58.15 | 0.20 | 95.15 |
| Time look. out | 4.40 | 7.12 | 7.45 | 19.37 |
| Total in nest | 41.20 | 65.27 | 8.05 | 114.52 |
| # visits | 4 | 5 | 1 | 10 |

9 June 730-1030 Nestwatch (incubation)

0.00. Noone here.

✓♀ 6.30. ♀269 enters.
13.40. ♂486 lands at hole.
13.45. ♀ looks out; ♂ leaves.
13.50. ♀ leaves

1 16.30. ♂486 enters.
19.55. L.O. (looks out) 20.25. B.D. (Back down)
21.15. L.O. 21.40. Leaves.

✓♀ 23.50. ♀269 enters.
30.00 (0.00)
8.05. L.O. 8.20. Climbs out.

10.00. ♂294 at hole; wakas to ♂486 who landed next to him.

✓♂294 10.10. ♂294 enters; ♂486 leaves
19.15. L.O. 19.30. Leaves.

2 23.25. ♂486 enters.
23.00. L.O. 23.25. Back down.
24.05. Leaves.
24.05. ♀269 ~~enters~~. at hole; wakas to ♂; leaves w/o entering

✓♀ 29.30. ♀269 enters.
32.30. L.O. 33.45. B.D.
44.55. L.O. 45.30. Climbs out & leaves

3 52.10. ♂486 enters.
55.50. L.O. 56.00. Leaves.

4 1.05. ♂486 enters.
4.10. L.O. 4.40. Leaves.

✓♂294 6.50. ♂294 enters.
7.35. Leaves.

✓♀ 7.40. ♀269 enters. Leave spread-wing waka to ♂294
12.40. L.O. 13.05 Climbs out. Leaves.

✓♀ 15.50. ♀269 back in
23.10. L.O. 23.30. Leaves.

5 24.00. ♂486 enters.
25.05. L.O. 25.15. Leaves.

6 34.15. ♂486 enters.
44.25. L.O. 44.55. Leaves

✓♂294 51.30. ♂294 enters.
56.35. Leaves

✓♀ 57.10. ♀269 enters. Gave waka to ♂294
2.40. L.O.
3.50. Leaves.

7 5.40. ♂486 enters.
9.00. L.O.
9.15. Leaves.

✓♀ 12.30. ♀269 enters
16.40. L.O. 18.15. Leaves.

✓♀ 28.15. ♀269 enters.
30.00. Me leaving

Total time: 180 min

| | ♀269 | ♂486 | ♂294 | Total | |
|---|---|---|---|---|---|
| Time incubating | 59.25 | 26.50 | 14.55 | 101.10 | 18 |
| Time L.O. | 5.40 | 2.55 | 5.15 | 8.50 | |
| Total in nole | 65.05 | 29.45 | 15.10 | 110.00 | |
| # visits | 8 | 7 | 3 | | |
| Time down in nole | | | | | |

## Melanerpes formicivorus

Road 1 — Hastings Reservation

12 June — Watched the nest here from 1500-1700. The big news is that the babies have hatched and the birds are now bringing food. See compilation on back.

13 June — Watched the nest from 730-1000 today. See compilation on back.

Afterwards, I checked the granary and was able to find no reasonable-looking stores remaining. I then went up to take a brief look at Valhalla and found, much to my amazement, a bird in the hole! This is no doubt where the other RI ♂♂ have disappeared to! See Valhalla notes for more details.

18 June — 800. ♀269 in the granary here as I walked up to Valhalla.

940. Watching granary from hide.

1040. No one at all passing by here. Leaving.

1045. Checked up at Warp 5, but saw no sign of stores, nests, or birds.

20 June — 900. ①♀269 in Sycamore perch tree below RI granary.

915. Meanwhile they're at least 2 other birds in the upper part of the territory above the granary (presumably Valhalla).

925. ♀269 now in the trees just above the Black Oak (above the granary) Now with a 2nd ♀(!): ②♀DB-WH(N) #444 (could she have been the Valhalla ♀ after all?).

1000. ♀269 now in the field by the (former) nest.

1020. Back in the Sycamore below the granary: ♀269 and ③♂486.

See Valhalla notes concerning a few further observations from up there.

12 June 1500-1700 Nestwatch
(1st day of feeding)

0.00. Nothing
32.30. ♂486 enters ① (bolus size)
43.30. L.O. (looking out).
44.35. Leaving
♀ 57.00. ♀269 enters ②
12.00. L.O.
12.35. Leaves.
♀ 23.30. ♀269 enters.
31.00. L.O.
31.40. Leaves.
♀ 34.25. ♀269 enters ①
35.40. L.O.
36.20. Leaves.
45.15. ♂486 enters ①
52.00. L.O.
52.20. Leaves.
0.00. Me leaving

Total time watched: 120 min

| | ♀269 | ♂486 | Total |
|---|---|---|---|
| Time down in nest | 23.45 | 17.45 | 41.30 |
| Time look out | 1.55 | 1.25 | 3.20 |
| Total in hole | 25.40 | 19.10 | 44.50 |
| # visits | 3 | 2 | 5 |
| x̄ bolus size(N) | 1.5(2) | 1(2) | 1.25(4) |

13 June 730-1000 Nestwatch

0.00. Noone here.
✓ 3.00. ♂486 enters ①
8.15. L.O.
9.30. Leaves
✓♀ 14.20. ♀269 enters ①
23.40. Leaves.
✓ 23.43. ♂486 enters ②
29.55. L.O.
0.05. Leaves
✓ 4.00. ♂486 enters ②
10.25. L.O.
10.55. Leaves
✓♂♂ 21.15. ♂ looking out (Missed who this was - no doubt ♂486) ← Missed arrival by ♂
21.40. Leaves
✓♀ 30.25. ♀269 enters ①
44.10. L.O.
44.25. Leaves
44.50. ♀269 at hole. Sat until 45.15.
Then kavit-cut twice, flew off.
✓ 46.50. ♂486 enters ②
53.30. Leaves
✓♀ 53.35. ♀269 enters ①. 55.35. Leaves
✓ 55.40. ♂486 enters ②
1.55. L.O.
2.10. Leaves
♀ 25.50. ♀ L.O. (no doubt ♀269) ← Missed arrival by ♀
26.15. Leaves.
✓ 27.15. ♂486 enters ②
43.35. L.O.
43.55. Leaves
✓♀ 46.25. ♀269 enters.
56.50. Leaves
✓ 56.55. ♂486 enters ①. ½ft away
♂294 sits near hole with food. Sat until 59.00 then ate his food and left.
59.20. L.O.
59.50 Leaves.
60.00. Me leave

Total time watched: 150 min

| | ♀269 | ♂486 | ♂294 | Total |
|---|---|---|---|---|
| Time down in hole | 35.30* | 49.32* | - | 85.02 |
| Time look out | 40 | 3.25 | - | 4.05 |
| Total in nest | 36.10* | 52.57* | - | 89.07 |
| # visits | 5 | 8 | (1)@ | 13 |
| x̄ bolus size(N) | 1(3) | 1.9(7) | - | 1.6(10) |

*length of 1 visit for each bird missed
@ Came to hole but didn't enter one

# Melanerpes formicivorus

Road 1 Hastings Reservation

21 June 1520. Watching the nest here to make sure nothing blatant is still going on here.

1550. This is hardly a definitive watch, but nobody has been near the place and it does support the "failed nest" hypothesis.

3 July Changes:

Add: ♀269. Seen at R3 on 23 April (and occasionally thereafter), first seen at R1 on 3 May → Moved here as an adult on 3 May (revolution occurring at that time indicating likely time of movement).

♀444. This bird was first seen here on 30 April, last seen "regularly" on 23 May, hung around peripherally at least until 20 June; however returned to R3 on 29 May and 5 June (L. Hanks notes). This bird tried very hard to be accepted here but ♂486 just wouldn't have it. → Moved here ~3 May. Left group about 26 May.

Delete: ♂222. After an absense of several months this bird was around for the 3 May revolution. On 5 May he was still seen in the granary. By 1 June, however, there was a bird in the Valhalla hole, suggesting that he had certainly split off by then → Moved to Watched group 18 May ± 2wks

♂183. Here on 3 May (scarce even then), not seen 5 May or thereafter → Disappeared about 4 May.

♀293. Last seen here on 9 Feb., seen at Finch first on 15 April, at which time she appeared to be in the early stages of moving → Moved to Watched group ~15 April.

17 September 1100. Some action here - chases, some Carricks, etc. Could be something up here.

# Melanerpes formicivorus

Road 1 Hastings Reservation

(17 September) 1615. Back now. All seems pretty quiet.

2 November 130. Counted stores: Main tree: 431. (None seen elsewhere). These birds aren't really into it yet, apparently.

5 November 1015. Watching from hide.

1021. ① ♀† DB-Wh(?)/Wh #269 in Valley Oak up toward Valhalla.

1040. Second ♀ here with ♀269: ② ♀† Yel-Blk/Yel #383 from M Yel-Blk/M R3! Both ♀♀ now in granary working stores.

1045. ③ ♂ Or/DB-Yel #294 in sycamore perch tree.

1100. ♀383 still here looking quite at home. The birds are flitting around a fair amount but do not seem to be storing any acorns to speak of.

1200. Leaving for a quick check of the area. Nobody here now. No sign of ♂486; also, why aren't these birds storing?

9 November 1100. Watching again from the hide.

1105. All (?) 3 birds together in Valley Oak up behind me: ① ♂ Or/DB-Wh #294, ② ♀† Yel-DB/Yel #383, ③ ♀M, #269.

1130. Well. This was not a lengthy watch but the results are nonetheless consistent with the hypothesis that ♂486 is kerplut. Leaving. Still no sign of large-scale storing.

18 December 1400. Counted stores: Main tree: 1085; Other: 144 } 1229.

Not bad, but still plenty of room for more, I'd say.

I took a sample of ~65 acorns from the granary and replaced them with some of my own. In doing so I noted a lot of acorns stored in cracks - at least 150-200 in the area I was checking out. I would therefore guess that this group is somewhat better off than my count indicates.

Walter D. Koenig



# Melanerpes formicivorus

## Valhalla — Hastings Reservation

13 June Much to my astonishment, I walked up here about 1015 only to find a ♂ in the hole I checked back on 1 June who would not come out! This called for immediate investigation, so at 1500 I returned, flushed out the bird, opened the hole, and found 3 incubated eggs. This, then, is a first - the first time this territory has ever truly been occupied, at least as far as I know. It will also, I think, be very instructive finding out who in fact lives here, and what there relations are to R1 "proper". For example, the bird I flushed out flew straight down the hill and over toward Poison Oak Hill, right through R1's area. What is going on, I wonder?

17 June 1300. Since nothing was learned about this group in my absence, I'm now watching in hopes of finding out something about who's here. So far, noone looked out when I arrived or while setting up the hide.

0.00. Nothing
(44 min) → 54.00. ♂ entered; Missed who he was.
38.00. Left. - M on R leg !?? Maybe White?
I guess ♂222. (~~3677~~)
25.00. ♂222 at hole; leaves w/o entering.
0.00. 3 hrs up.
1.30. ♂222 at hole again - left w/o entering.
Me leaving.

Not completely satisfying, but at least the nest appears to be alive and one of the birds is ♂222, as expected.

1600. Leaving.

18 June 800. Watching here again. (Larry is watching simultaneously at R1).

000. Noone in hole.
0.00. Still 0
15.15. ♂222 entered.
1545. Looking out
1630. Left.
25.00. Leaving.

Things look marginal at best for this nest (and still with no peek at the ♀!). At 925 I moved down to watch the R1 granary for a stretch.

930. While setting up the hide at R1 I heard some (go to p.3)

# Melanerpes formicivorus

## Valhalla Nest Record

1 June

13 June 1015

1500

18 June 1700

## Hastings Reservation

Bird in hole; hole checked: empty. (see RI notes)

Bird in hole.

Hole opened: 3 eggs, opaque and incubated:

① 26.3×19.5

② 25.3×18.5

③ 26.4×19.3

3 newly hatched babies; 2 starved; 1 ~~are~~ barely alive. All 3 removed.

1979 Walter D. Koenig

## Melanerpes formicivorus

Valhalla — Hastings Reservation

(18 June) calls from up here. Returning, I saw 2 birds over in the trees across the ravine from the nest tree, one of whom was an unbanded ♀. They preened for a few minutes and then flew off up the hill. This is not good evidence, I realize, but is at least some indication that the ♀ is probably unbanded here. The big question remains as to whether ♂183 is involved here or not.

1700. Went up to the nest where all 3 eggs had hatched. However, nest attendence has clearly been near zero as 2 were dead (wt: 3.7gm and 2.8gm) and the 3rd so barely alive that I removed him to try and revive him elsewhere.

20 June Watching at the RI-Valhalla interface. See RI notes.

1100. A sudden flurry produced 3(?) birds here in the vicinity of the granary, one of whom I think was being chased. They all flew over to the trees across the gully and proceeded to hawk over there. One was ①♂wh-Red/Dk #222. A ♀ was with him; my look at her was poor but she may have been unbanded.

1110. ♂222 sitting up there by himself now.

1114. ♂222 flew up & past the nest tree over to the other side of the hill (see back).

1135. ♀ here again briefly.

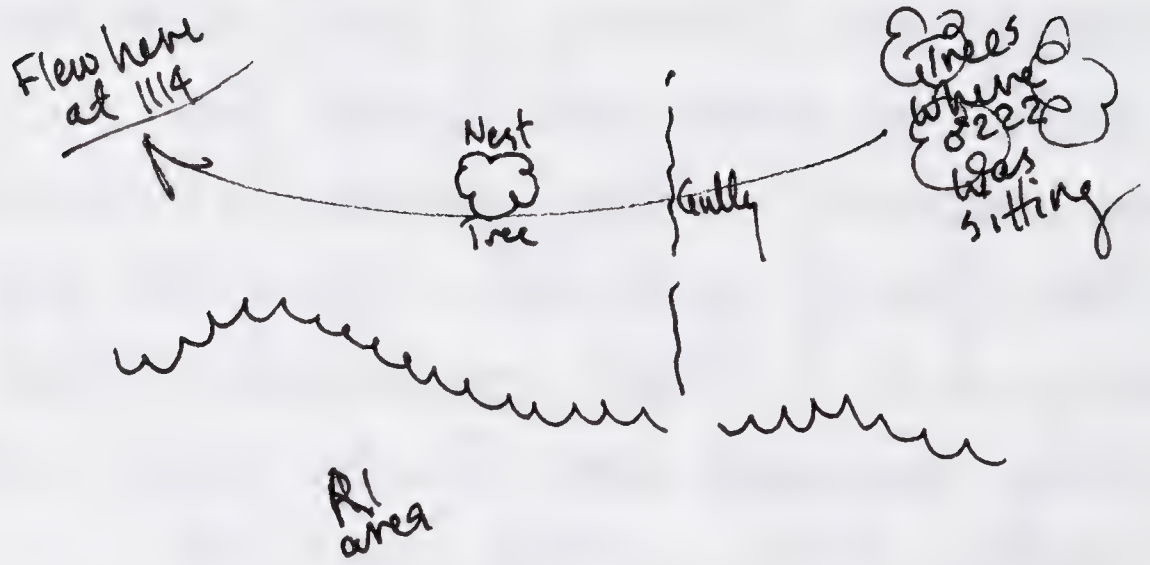
1145. ♂222 is now in a snag way up the hill almost to ARF.

1200. Going to check up the hill.

1230. After chasing these birds around for awhile between the nest tree and ARF I'm convinced that 1) this is a real territory, 2) there are most likely only 2 birds here, 3) one is

20 June

• Sing - 0222
at 1145



# Melanerpes formicivorus

Valhalla — Hastings Reservation

(20 June) ♂222, 4) the other, the ♀, may be unbanded but remains elusive. More watching needs to be done here, but at least these birds are spending their time in this ~~area~~ (exclusive) area and not still mixed up directly (or at least constantly) with RI. Note that they also appear to be defending it (see 1100).

21 June 1645. Having set up an ambush at the nest hole, I'm now watching from the hillside. I have heard birds in the vicinity, ~~N~~3 1715. Giving up for now.

22 June ~~5000~~ 400. Even though the report was that only 1 bird roosted here (as it had been previously as well), I ambushed anyway. The bird was, as I suspected, ♂222, who was weighed and released by 430.

1145. Now back here to sit and watch for a stretch.

1155. ♀(!) hawking over across the gully.

~~1355~~ 1355. No further luck, even with the recording. This will obviously be difficult, but at least it continues to appear as though a ♀ is here and, theoretically at least, identifiable.

1350. Success! A disturbed call from up the hill off to the left (S) of the granary enticed me to walk up. And I was successful in seeing an Unbanded ♀ in a small Live Oak just up a short ways who may have been sapsucking here. In any case, this would appear to be yet more evidence that the ♀ here is not ♀444 but unbanded.

3 July Add: ♂222. Founded group ~ 18 May (see RI notes)
♀unbanded. " " "

24 August Two birds roosted in the nesthole tonight - ripe for another ambush!

# Melanerpes formicivorus

## Valhalla

26 August 500. A successful ambush here netted ♂222 once again along with the unbanded ♀, now ♀519.

28 September 1640. Bird in hole here, plus 2nd in vicinity. I didn't hear anything from in the hole, but they seemed rather upset over my presence, so I ought to check back here.

5 October 1520. Nobody in hole, but 2 birds in the vicinity. Also a few stores in the granary.

1525. ① ♂ wh-Red #222 plus a ♀ here together.

14 October 1710. Two birds in the vicinity still, but only a very few stores here. Once again no serious suggestion of a nest.

2 November 1340. Flushed 2 birds from the granary, which contains all of 118 acorns!

5 November 1200. Again flush 2 birds from the area: ① ♀ Blk-Yel/Blk #519 and ② ♂ wh-Red #222, as expected.

18 December 1500. Counted stores: 396 (!) Not bad! Also took a small sample of 21 acorns from a low limb, replacing them with some of my own. One bird was seen in the area.

I also noted a [new?] possible roost hole in a different part of the nest tree from where the other holes are. This group isn't doing so badly at all!

28 December ♀519 apparently moving to Westgate - see Wgate notes.

## Hastings Reservation

1979 Walter D. Koenig

# Melanerpes formicivorus

Finch — Hastings Reservation

4 January
1240. Watching. ①♂ WH/M #278; 2 others.
1245. ②♂ M/-Yel-G #282; 3rd ♂.
1315. Leaving. There are several birds here but they aren't coming down to the granary where I can get a decent look at them.

10 January
1400. Trying again.
1415. Nothing. Leaving. Still not the right day.
1420. Just as I was leaving ①♂ WH/M #278 and several others showed up.
1425. Back to zero. Leaving.

19 January
1240. Once again - Several birds around. ①♂ M/Red-Tan #282;
1300. ②♂ Gn-Blk/Gn-Blk #63. ③♂ WH/M #278. ④♂ ub.
1320. ⑤♂ DP/LP #66.
1325. This is the 2nd time I've been here to hear a Steller's Jay at the bridge give several high-quality imitations of AW alarm calls (he was preening at the time and in no state of obvious alarm himself).
1330. ⑥♂ LP-LB/M #67.
1340. Leaving. Much better. All here but ♂386. Also still no ♀.
Counted stores: 196, all in the Valley Oak. None are accessible enough to be sampled, however.

9 February
1620. There seem to be only a few stores left here.

4 March
1100. As I suspected, these birds are now out of stores entirely. I did hear one bird while I was here do a brief Karnit-cut.

2 April
830. I flushed one bird from a tree by the road (across from the sycamore) who flew to a tree by the Valley Oak perch up on the hill towards ARF. It appeared in a brief look to be a ♀,

## Melanerpes formicivorus

Finch — Hastings Reservation

(2 April) which of course would be significant, but ~~in~~ then she moved (I thought to the VO perch tree), and when I looked at the (same?) bird sitting in that tree it turned out to be a banded ♂ Red/Drab-?: [#67?] (darkish eye). In any case, somebody is still here, even if they don't have a ♀ yet.

No sign of anyone else here by 910.

1820. (Near dusk) All I found at the Sycamore nest tree was a Pygmy Owl just outside of the '77 nest hole, but over in the upper hole over the road in the Sycamore granary an AW was looking out at me.

13 April 1130. Saw ♂66 hawking in the Sycamore storage tree and ♂282 over on the Sycamore nest tree. Noone in any holes, but there is some action here and something may be up.

15 April 930. Watching. Some calls here - sound like they're from way up the hill

943. Poof! At least 5 birds appeared simultaneously in the VO granary, flying in from the other side of the road. I didn't identify any for sure, but I think they included at least 1 ♀. Unfortunately they dispersed almost as quickly as they appeared.

947. A ♀ now atop the nest sycamore.

1045. Several ♂♂ and a ♀ here now. Identified were ① ♂ LP-LB/M #67, ② ♂ LG-DG/LG-DG #63, and ③ ♂♀ M/Red-Tan #282.

1050. ♀ is here: ♀ M/Light- [?? #293? - see below].

1045. Some chasing up in the live Oaks. A ♀ sitting on the Sycamore nest tree just flew over to R1 (suggesting that she is probably ♀ M/Or-Lg #293?)

1052. Someone is Urrking (carrick?) here in the VO.

# Melanerpes formicivorus

Finch — Hastings Reservation

(15 April) 1110. Getting hot and slow. Obviously something is up here in regards to finally aquiring a ♀, but things still seem to be rather preliminary. This group will need more watching.

19 April 1545. Watching. Nothing here at the moment.

1645. Zilch. Nobody here at all. Anywhere.

20 April Rwrg: ♂386. Last seen 27 Nov. 1978; gone by 19 Jan. 79 → Disappeared about 23 December 1978 ± 2 weeks.

23 April 1000. Watching.

1015. ①♀ unb/Or-Lg #293 (from RI) in VO perch tree above pulloff. Greeted ②♂ Tan-Red/T-R #282 when he flew in and began to eat catkins.

1025. ♀ unb, looking furtive, landed in sycamore granary and began investigating. From the VO above then came numerous Karrit-cuts, followed by first ♀293 flying to the next door sycamore, then both birds (♀293 and ♂282) landing in the granary and shagging out the ♀ (♀293 taking a more aggressive part). Looks like ♀293 is serious about this group.

1030. Leaving. Nobody else is evidence here.

25 April 1545. Watching. ①♂ Grn-Blk/Grn-Blk #63 sitting in tree by creek.

1546. Chases! 3 birds flying at each other! Activity! Wakas! Sitting on top of nest sycamore preening is ②♂ M/ #282. There is also an unbanded ♀ here: ③♀ unb.

1555. The ♂♂ are definitely involved in chasing here; I think, however, that 1-2 ♀♀ are the catalyst.

1557. Quiet now.

1610. Poof! Wakas. Karrit-cuts! ④♀ M/ unb/Grn #293 karrit-cutting

# Melanerpes formicivorus

Finch — Hastings Reservation

(25 April) from the top of the VO granary. Nobody appears to be chasing her; she appears to be quite friendly with the ♂♂ 1622. Nothing for the last 10 minutes. Leaving; clearly the confusion resulting (apparently) from the shortage of ♀♀ here and ♀293's insistence to be 2 places at once continues for the time being.

26 April Purge: ♂ub and ♂278. Last seen 19 Jan., gone by 15 April, → Disappeared about 28 Feb. ± 1 Month.

27 April 830. Watching.

840. Some chasing and activity going on up the hillside.

845. Garricks. ① ♂ M/Red-Tan #282. ♀ also

855. ♂282 up in VO ~~tr~~ above creek along with ② ♀ tan/red-# 293 once again. Clearly there's still some discussion going on about what's up here, however.

900. ♂282 and ③ ♂ G-B/G-B #63 here along with ♀293, who greets them avidly wherever they go. What, I wonder, has become of ♂♂66 and 67, here 2 short weeks ago? They may be here, but if so they are certainly not very interested in the proceedings.

930. Leaving. No intruders seen, but ♀293 is still quite nervy. I do think she's definitely here to stay, though. She may still be slightly on the brink, but she's here constantly & and I think it's clear she's made her choice. Still a lot of activity here.

4 May 1215. Several birds here along with some activity.

11 May 1000. Noone in any holes here.

16 May 800. " " " " "

815. Several birds in the area slightly towards RI: ① ♀ tan/pink #293,

# Melanerpes formicivorus

Finch — Hastings Reservation

(16 May) ③♂ T-Red/T-Red #282; ③♂ Grn-Blk/G-B #63.

830. The birds do seem to be hanging together. They may have a nest soon.

23 May 1130. Bird in the '77 nest hole (the low one, thank goodness) in the Sycamore. Could be it!

1815. Noone in hole, but I went up to it anyway and was rewarded with 4 eggs, translucent and fresh!

25 May 645. Bird in hole. Going up, the same 4 eggs are in the nest. These were measured and returned.

27 May Watched the nest today from 945-1205. See compilation on back. Note the subordenance of ♂282 to both ♂♂63 and 66 (♂67 appears to have disappeared); also the apparent equivalence of ♂63 and ♂66.

30 May Watched the nest here from 900-1200; see compilation below. No feedings were obvious and I figured they were still incubating, but by tonight Larry (who watched roosting - ♂63 roosted in the nest) reported they were bringing food to the nest.

✓ 0.00. ♂66 in hole looking out
1.30. Back down.
9.30. leaves

✓ 9.40. ♂63 enters
11.45. looks out. 1550. Leaves

16.00. ♂66 enters. The 2 birds waka'd during the exchange softly
✓ 21.00. ♀293 enters.
21.05. ♂ looks out. 21.10. ♂ leaves.
✓ 30.50. ♀ leaves

x 31.00. ♂282 enters. ♂ chattered to the ♀ as she came out!
33.18. ♂ leaves. chatters at ♂66.

✓ 33.25. ♂63 enters.
36.15. looks out 36.30. Leaves

✓ 36.34. ♂66 enters.
44.10 leaves.

44.15. ♂63 enters. Wakas again.
45.10. looks out. 4640. Back down.
48.35. ♀ enters. Turns right around. 48.43. leaves.
✓ 49.10. ♂ looking out of hole; 49.15. Back down.
57.40. " " 57.50. " "
3.50. Leaves. Wakas to ♂66

4.25. ♂66 enters.
✓ 17.30. ♀ leaves
22.35. ♂ leaves; wakas softly to ♂63

✓ 22.45. ♂63 enters.
44.10. ♀293 leaves at hole. 44.50. Leaves (w/o entering)

48.25. ♂282 enters.
48.40. ♂63 looks out.
x 48.55. leaves.
51.40. ♀293 at hole. 51.47 leaves w/o entering.
53.33. ♂282 leaving. Chatters at ♂63.

53.50. ♂63 enters.
55.20. ♂ looks out
✓ 56.00. several Carricks. An intruder.
57.10. Back down.
2.25. leaves

✓ 2.38. ♂66 enters
10.20. ♂ leaves.
♂282 chatters at ♂66 & looks away.

10.27 enters (♂282)
13.00. leaves

13.42. ♂63 enters
21.30. More Carricks nearby
✓ 25.20. looks out 25.40. Leaves.

35.10. ♂66 enters.
✓ 39.10. ♂63 leaves; gives open wing waka at ♂66 who leaves at 39.15
39.18. ♂63 flies down.

✓ 39.50. ♂66 enters.
40.20. ♀ at hole, leaves 4042 w/o entering
44.20. ♂ leaves

# 27 May 945-1205. Nest watch (incubation)

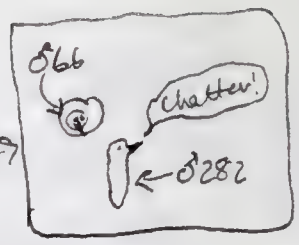
♂66 ✓
- 0.00. ♂ in hole
- 3.40. ♂ left.

♂66 ✓
- 3.42. ♂66 enters hole.
- 13.10. Leaves.

♂63 ✓
- 13.15. ♂63 enters.
- 15.00 (0.00).
- 0.55. looking out. 1.45. Back down.
- 12.20. " " 16.10. Leaves.
- 16.20. ♀293 at hole but leaves w/o entering

♂66 ✓
- 29.45. ♂66 enters
- 41.55. leaves

* ♂282
- 42.00. ♂282 enters. Gave very submissive chatter at ♂66 as he turned his head to one side →




- 43.15. ♂63 lands at hole. Leaves w/o entering the latter bird departed.
- 43.15. ♂282 looks out ✓
- 43.45. Back down.
- 48.45. Leaves

♂63 ✓
- 48.55. ♂63 enters
- 55.20. Leaves

* ♂66 ✓
- 55.35. ♂66 enters. The 2 ♂♂ waka'd at each other during the changover
- 0.00
- 1.55. Looks out
- 5.50. Leaves

♀ ✓
- 6.00. ♀293 enters, looks out immediately
- 6.05. ♀ leaves,

♂282 ✓
- 6.07 ♂282 enters
- 10.45. Looks out. 11.55. Back down.
- 14.50. ♀ lands, goes inside.
- 15.10. ♀ looks out.

+♀
- ~~15.40~~
- 16.00. ♀ goes down.
- 16.35 ♀ looks out. ✓
- 17.35. Back down.
- 17.50. ♂ looks out!
- 18.15. ♂ goes down.
- 18.20. ♀ leaves.
- 18.22. ♂ looks out 1830. Back down
- 20.05. ♂ leaves

♂63 ✓ . +♀
- 20.12. ♂63 enters.
- 24.10. looks out 26.10. " "
- 33.45. ♀ goes in (♀293).
- 33.52. ♀ looks out. ✓
- 34.20. ♀ leaves.
- 34.25. ♂ looks out.
- 36.10. ♂ leaves

* ♂282 +♀
- 36.15, ♂282 enters. ♂282 gave definite submissive chatters to ♂63 during the changeover.
- 37.30. ♀293 at hole, leaves at 37.34. w/o entering
- 47.25. ♀293 enters.
- 47.45. ♀ looks out. ✓
- 47.48 ♀ leaves.
- 54.25. ♂282 leaves - gave chatters at ♂66 who had landed at the hole.

♂66
- 54.45. ♂66 enters.
- 0.00.
- 1.40. looks out.
- 3.00. Back down.
- 5.00. He leaves

Total time watching: 140 min

| | ♂? | ♂63 | ♂66 | ♂282 | ♀293* | Total |
|---|---|---|---|---|---|---|
| Time incubating | 3.40 | 32.03 | 36.53 | 36.40 | 2.07 | 111.23 |
| Time looking out | 0 | 8.15 | 5.15 | 2.13 | 2.26 | 18.09 |
| Total in nest | 3.40 | 40.18 | 42.08 | 38.53 | 4.33 | 129.32 |
| # visits | 1 | 3 | 4 | 3 | 4 | 15 |

*overlapped once w/ ♂63 and twice w/ ♂282.

# Melanerpes formicivorus

Finch Nest Record — Hastings Reservation

23 May 1130. Bird in hole.

1815. Hole opened, 4 eggs, fresh. Marked and returned.

25 May 645 Still 4 eggs:

① 27.2 × 20.5

② 25.5 × 19.7

③ 26.9 × 19.4

④ 26.6 × 20.2

30 May Eggs hatched

2 June 1815 Checked nest; 4 babies:

| | | #499 ①Blk-Mv. | #500 ②Y-LB | #501 ③DP-DB (may lose band) | ④#502 |
|---|---|---|---|---|---|
| ③ | 2 June 1815 | 20.8 | 16.6 | 14.1 | 11.2 |
| | 21 June 1330 | 91.0 (88) | 74.0 (79) | 80.5 (84) | 68.8 (71) |

# Melanerpes formicivorus

## Finch

(30 May)
- 44.25. ♂63 enters.
- 46.00. ♂ leaves
- 46.04. ♂66 enters.
- 52.05. leaves
- 52.15. ♀ enters (♀293)
  - waka's during the exchange
- 54.14. ♀ leaves.
- 54.20. ♂282 enters.
  - 56.20. looks out
  - 57.20. Back down.
  - 0.00. Me leaving

## Hastings Reservation

Total time watched 180 min

| | ♂63 | ♂66 | ♂282 | ♀293 | Total |
|---|---|---|---|---|---|
| Time down in hole | 68.38 | 61.09 | ~~14.39~~ | 9.50 | 154.16 |
| Time look out | 8.30 | 1.35 | 1.00 | .08 | 11.13 |
| Total in hole | 77.08 | 62.44 | ~~15.39~~ | 9.58 | 165.29 |
| #Visits | 7 | 8 | 3 | 2 | 20 |

(14.39) (15.39)

2 June 1815. Checked the nest and weighed the babies, all 4 of whom look good.

3 June Watched the nest from 800-1030 today. See compilation on back.

21 June 1330. Banded and sexed the babies, all 4 of whom look fine. They are now #499 through 502.

3 July Add: ♀293. Moved here about 15 April (see R1 notes).
Delete: ♂67. Last seen on 15 April, apparently gone by 27 April → Disappeared about 21 April ± 1 week.

17 September 1630. Most of this group is in the Valley Oak and adjacent Live Oak up on the side of PO Hill below the chaparral where R1 used to hang out regularly (on the R1 side of the 'divide'). Seen were ① ♂ G-B/G-B #63, ② ♂ Red/LB-Wh #66, ③ ♂ Tan-R/T-R #282, ④ j → ♀ Red/LG #500 (molting to ♀) and ⑤ j Yel/M #501 (still ♂-type). All here eating acorns and the like.
⑥ j DB/LG- #499 (still ♂-type)
1645. Leaving.

10 October 1345. Watching. ① ♂ M/Red-T #282 in Sycamore granary.
③ ♀ M/Red-LG #293 in VO granary.
1400. ③ ♂ Yel/M #501. At the moment there are 2-3 jays in the granary either storing or eating acorns.
1412. ④ ♀ Red/LG #500 in Syc. nest tree.
No sign of jays getting chased out of the granary here.

## 3 June 800-1030 Nestwatch

Total time watched: 150 min.

0.00. Noone in hole.

- 24.30. ♂63 enters ③ (bolus size)
- 24.50. Looks out.
- 25.25. Back down
- 37.30. Leaves

- 37.35. ♂66 enters ② No chattering.
- 40.15. Leaves.

- 40.20. ♂? enters ② No chattering; therefore I will prescribe this to have been ♂63
- 55.00. Leaves

- 55.05. ♂66 enters.
- 58.45. Leaves.

- 58.50. ♂63 enters
- 1.30. ♂282 enters ②
- 1.38. ♂63 leaves
- 6.05. ♂282 leaves, chatters.

- 6.08 ♂63 enters ③
- 9.00. Leaves.

- 9.02. ♀293 enters ② No vocalizations.
- 9.18. ♀ leaves

- 11.07. ♂282 enters ③
- 11.53. Leaves; chatters.

- 12.00. ♂66 enters ③
- 14.05. leaves

- 14.08. ♂63 enters ③ No vocalizations during exchange
- 1510. ♀ lands
- 1515. ♂282 lands next to ♀; ♂282 enters hole. ②
  - ♀ leaves.
- 1530. ♂63 leaves
- 15.40. ♀ at hole again. Leaves at 1615 w/o entering.
- 19.00. ♂282 leaves, chattering

- 19.02. ♂66 enters ②
- 21.00. ♀293 enters ②
- 21.03. ♂ looks out.
- 21.12. ♂ leaves
- 21.15. ♀ leaves

- 21.25. ♂282 enters ②
- 24.35. ♀293 enters ③
- 24.42. ♂ leaves
- 32.10. ♀ looks out.
- 32.30. ♀ leaves

- 33.20. ♂63 enters ③
- 33.35. Leaves.

- 33.37. ♂282 enters ②; chatters.
- 38.35. ♂63 enters ②; chattering from inside the hole (♂282 no doubt)
- 38.40. ♂282 leaves

- 42.10. ♂282 enters ③
- 42.15. ♂63 looks out.
- 43.15. ♂63 leaves.
- 43.30. ♂282 leaves. Chatters.

- 43.38. ♂66 enters ③
- 58.00. ♂ leaves

- 58.02. ♂63 enters.
- 58.15. Leaves.

- 58.17. ♂282 enters
- 18.15. Leaves

- 18.22. ♂66 enters ②
- 27.30. Looks out
- 30.00. Still looking out.
  Me leaving.

| | ♂63 | ♂66 | ♂282 | ♀293 | Total |
|---|---|---|---|---|---|
| Time down in hole | 38.15 | 33.56 | 38.44 | 8.06 | 119.01 |
| Time looking out | 1.35 | 2.39 | 0 | 1.20 | 5.34 |
| Total time in hole | 39.50 | 36.35 | 38.44 | 9.26 | 124.35 |
| # visits | 8 | 6 | 7 | 3 | 24 |
| x̄ bolus size (N) | 2.5(6) | 2.4(5) | 2.33(6) | 2.33(3) | 2.4(20) |

## Melanerpes formicivorus

Finch — Hastings Reservation

(10 October) 1435. ⑤ j♂ DB/LG-DB #499 in sycamore nest tree. ⑥♂ DP/LP #66.

1445. Going to check stores. A fairly good, if slow, watch. I don't know where ♂63 is hanging out, but I think I got everyone otherwise. j502 is gone, I would guess.

| Stores: | | | |
|---|---|---|---|
| | Syc. Granary: | 124 | 149 |
| | VO Granary: | 25 | |
| | Misc: | 0 | |

These birds haven't really gotten into the swing of things, really.

17 December 1100. Watching. Noone in the vicinity at the moment.

* 1105. ①♂ M Tan-Red/T-R #282 here; flew into Live Oak and harvested an acorn. ②♂ Or/M #501 in Sycamore nest tree. ③♂ Grn-Blk/G-B #63.

1106. A 2nd acorn harvested by ♂282 (Live Oak). ④♀ M/Or-LG #293. ♀ eating acorn bits.

1109. ♂282 harvested a 3rd acorn. ⑤♂ Red/LB-Wh #66 just flew in with a newly-harvested Live Oak acorn as well.

1115. Birds seem to be arriving with new acorns from all over. At least 3-4 in last 2 minutes.

1119. ⑥♀ Red/LG Red/LG #500 here. This bird is hanging out in the granary; ♂501 isn't.

1200. Leaving to count stores. j502 is probably gone; ♂499 may be here but was missing today.

| Stores: | | | |
|---|---|---|---|
| | Sycamore Granary: | 603 | 1665 |
| | Valley Oak granary: | 802 | |
| | Nest tree, Misc: | 260 | |

Not bad, especially as they seem to still be going to it (still a fair

Melanerpes formicivorus

Finch Hastings Reservation

(17 December) amount of room in the Valley Oak granary).

I was able to get a sample of 75 stored acorns, 35 from the Sycamore and 40 from the Valley Oak, and replace them with some of my own.

1979 Walter D. Koenig

# Melanerpes formicivorus

Road 3 — Hastings Reservation

4 January 1035. Watching. Flushed several birds right away: ① ♀ DB-Wh(u)/Or #444, ② ♀ Yel-DG/Yel LG-DG/M #383, ③ ♂ M/DK #184.

1050. ④ ♂ Or/LB #68. ⑤ ♀ LB-Red-LB #446. ⑥ ♀ DB-Wh(u)/Wh #269. Birds are here working stores and/or eating acorns.

1120 ⑦ ♂ Red-Blk/Red #382. The 2 1st. yr birds are all over the granaries.

1135. I've seen all 7 birds several times now, at least.

1146. She's here after all: ⑧ ♀ DB/Yel-LB #265.

1235. Leaving. ♂384 may still be around, but he definitely isn't here today. Others are and are busy going through their stores.

10 January 1430. Counted stores: Valley Oak: 193, Sycamore: 583 } 776

Took a sample of 25 acorns and replaced them with some of my own.

4 March 900. Watching. ① ♂ M/Blk-Wh #184.

910. ② ♂ Or/LB #68.

* 917. ♂68 gave a few submissive chatters when ♂184 flew in and landed 2' below him on the branch!. ♂184 > ♂68. Note also that ♂68 still has a slightly darkish eye.

921. ③ ♀ M/Wh-DB #269. Examining '75 nest hole.

928 ④ ♀ DB/Y-LB #265. Birds here working stores and eating acorns.

933. ⑤ ♀ Y-DG/Yel #383. ⑥ ♀ LB-R/R-LB #446.

957. ♀446 back hawking now.

1005. ♀446 was just about on top of a ♂ (184?), begging, and being alternately fed acorn bits and pecked (see back).

1035. ⑦ ♀ DB-Wh(u)/Or #444.

1038. ♀444 (3) landed next to ♀446 - and the both chattered

4 March

touching even
while ♀446 clattered
and begged.
♂(84?) eating an acorn; fed bits to
♀446 and also pecked at her several
times.

## Melanerpes formicivorus

Road 3 Hastings Reservation

(4 March) at each other! (♀446 rather more vigorously, however).

1040. Going to count stores. Looks like ♂384 is gone for sure, while ♂382 is now suspect. All the ♀♀ here, however.

Stores: Valley Oak: 85
Sycamore: 220
} 305.

Going, but not gone.

13 March Purge: ♂384. Last seen 25 Oct. 1978, gone by 4 Jan. 1979, → Disappeared about 29 November 1978 ± 1 Month.

13 April Checking here today, there are definitely birds but they unfortunately appear to be plum out of stores. This may call for some supplementation - I want a nest here!

15 April 800. Watching.

822. 3 birds around: ①♂ WN-Blk/Blk-WN #184, ②♀ DB/Yel-LB #265, and ③♂ Or/LB #68.

825. ♀265 just picked off and is eating a Sycamore bud!

833. Again these 3 birds and noone else around.

930. Leaving. No sign of anybody other than these 3; also no indication of any stored acorns remaining. This is interesting - it appears as though the whole flock has dispersed right about on schedule, only leaving the hard-core. Also no sign of a nest as yet.

19 April 1645. Noone in any holes here.

20 April Purge: ♂382. Last seen 4 Jan., gone by 4 March → Disappeared about 2 Feb. ± 1 Month.

20 April 1055. Watching.

1112. ①♂ Or/LB #68 and ②♀ DB/Yel-LB #265.

1115. ♀ flew to forest. ♂68, alone in the VO granary, is actually giving several "Urrks (they are only 1 syllabled and may

# Melanerpes formicivorus

Road 3 Hastings Reservation

(20 April) I think, be Urrks rather than the more common Garrick. If so, this is the first time I've been able to distinguish them. However, I think that Urrks may be quite uncommon). ♂68 continued to Urrk for a minute until the ♀ returned, at which point he greeted her and then flew off himself.

1135. ♂68 and ♀265 here again.

1155. Nobody here now. All quiet. Leaving.

23 April 1045. Watching. ①♂Or/LB #68 in perch sycamore.

1100. ②♂M/Blk-Wh #184.

1103. ! 4 birds here: ♂184, ♀, ③♀M/Wh-DB #269, 4th bird. All the young aren't gone after all.

1108. In sycamore across the creek: ④♀+DB/Wh-LB #265.

1145. Leaving.

25 April 1630. Nobody in any holes here.

26 April Purge: ♀383, ♀444, ♀446. All last seen 4 March, gone by 15 April. ⇒ Disappeared about 25 March ± 2wks.

I've reconsidered given tonight's observations → Leave these birds as is for the time being.

1910. A big surprise here. After watching "all" four birds roost in the '78 nest hole, at least 2 birds (and possibly 3) appeared from toward Finch, pre-roost mounted in the Valley Oak granary, and roosted in the '75 nest hole across from the '78 ~~nest~~ hole. Quite a surprise! Obviously there are either more birds than I thought still here (possibly spending most of their time elsewhere [P.O. Hill?] and returning only to roost?) or something very strange and unheard of is happening.

27 April 720. Watching. 742. ①♂M/Blk-Wh #184.

808. ♀ sitting on Sycamore on other side of creek. ♂184 landed, hunched low to branch below her; then walked up

# Melanerpes formicivorus

Road 3 — Hastings Reservation

11 May 1000. Watching. 4(!) birds here: ①♂ M/Blk-Wh #184, ②♀ DB/Wh-LB #265, and ③♀ DB-Wh(w)/Wh #269(!!) All hawking.

1005. ♀269 is definitely here hawking with the others.

1013. The birds are hawking up a storm today.

1025. Argh! There is in fact a new hole here that I knew nothing about and a bird just went into it!

1035. ④♂ DB #68.

1040. Leaving. The new hole will have to be opened (or at least checked) as soon as possible.

1430. Hole opened: 3 eggs, fresh. All were measured marked and returned. (eggs were white and ~~transparent~~ translucent).

12 May Watched incubation here this morning. Later, at 1500, I ~~opp~~ checked the hole to confirm that there are only 3 eggs in it.

14 May Watched the nest today from 1030-1300. ♀269 was not seen at all either at the nest or elsewhere.

15 May Watched here from 1430-1700. See compilation below:

0.00. No one in hole (?)

♂184
- 3.10. ♂184 at hole
- 3.15. ♂184 went in.
- 25.00. Looking out. 25.05. Back down
- 27.55. " " 28.12. Leaving

♂68
- 28.20. ♂68 going in hole. Birds chattered at greeting but no obvious dominance/subor.
- (30.00) 0.00 –
- 15.00. Looking out. 16.40. Back down.
- 21.50. ♂68 leaving

♀265
- 21.55. ♀265 entered hole.
- 35.15. Looking out 36.43. " "
- 40.50. Leaves

♂184
- 40.55. ♂184 entered
- 44.20. ♂184 left

♂68
- 44.27. ♂68 entered
- 49.50. Looking out. 51.10. Back down
- 52.00. ♀ intruder: ♀ Or/Blk-Yel? getting displaced by ♂184.
- 57.00. ♂68 left hole

Total time watched: 150 min. (still incubation)

(continued on p. 6)

## 12 May Nestwatch, 1007-1207 (Incubation)

Total time watched: 120 minutes

? 7.00. Start. ♀ in hole.
25.00. ♀ left hole.

♂184
25.20. ♂184 in hole.
34.40. ♂184 looked out; 34.43 back in.
42.10. ♂184 left

♂68
42.15. ♂68 went in.
47.45. ♀265 landed.
47.50. ♂68 left.

♀265
47.55. ♀265 went in
52.40. ♀269 landed near hole.
52.40. ♀265 left.
53.10. ♀269 looking into hole.

♀269
5420. ♀269 entered.
54.27. looking out (turned around right away)
54.33. Went into the hole
54.45. Looking out.
57.55. ♀269 left.

♂184
59.25. ♂184 entered.
19.05. ♂184 left.

♀265
19.14. ♀265 entered.
39.00. ♂ landed on other side of hole.
49.45. ♀ looking out of hole.
50.35. Back down.
7.00. leaving. ♀ still in hole.

| Totals | Time incubating | Time looking out | Total time in hole | #trips to hole |
|---|---|---|---|---|
| ♂184 | 36.27 | 0.03 | 36.30 | 2 |
| ♂68 | 5.35 | - | 5.35 | 1 |
| ♀265 | 51.41 | 0.50 | 52.31 | 2 |
| ♀269 | 0.12 | 3.23 | 3.35 | 1 |
| Total | 93.55 | 4.16 | 98.11 | 6 |

Total time watched: 150 min.

| Totals | Time incubating |
|---|---|
| ♂184 | 26.45 |
| ♂68 | 34.03 |
| ♀265 | 67.56 |
| Total | 128.44 |

| Time looking out | Total time in nest | #trips to nest |
|---|---|---|
| 6.08 | 32.53 | 2 |
| 5.34 | 39.37 | 3 |
| 4.18 | 72.14 | 8 |
| 16.00 | 144.44 | |

## 14 May Nestwatch 1030-1300 (Incubation) (15 min watch)

0.00. ♂68 in hole looking out.
6.16. Looking out.
10.20. ♀265 landed.
1038. ♀265 entered hole.
1422. Reentered hole.
322. ♂184. Entered hole
720. Looking out.
607. " "
13.35. Left.
13.40 ♂68 entered hole. (Two ♂♂ chattered on meeting at hole entrance)
0.00
0.00.
3.40. Looking out.
4.30. ♀265 landed
4.35. ♀265 entered hole.
755. Looking out (bird is not).
0.00
5.00 " "
5.37 " "
14.54 " "
3.05. ♂184 Entered hole
8.25. Looking out.
11.18 ♂68 entered hole
3.15. Looking out
5.10 ♀265 entered hole.
9.30. Looking out.
0.00.
415. " "

240. Back down
6.58. " "
1028. ♂68 Left.
13.35. Looking out. 1344. Out of hole; at lip
312. Left hole.

925. Back down
750. " "

415. Left hole.

912. Back down.
507. " "
550 " "
0.03 Leaving

950. Looking out 955. Ba
0.00.
0.00. End.

1045. Leaving hole 1055. Flew off.

452. Leaving

1025. Back down.
538 " "

# Melanerpes formicivorus

## Road 3 Nest Record

11 May 1030 — New hole discovered - bird incubating

1430 — Opened: 3 eggs, Marked: (fresh)
① 25.4 × 20.7 (did not hatch)
② 26.2 × 19.7
③ 25.8 × 20.6 (hatched)

12 May 1500 — Still 3 eggs.

23 May 1100 — Two babies and 1 opaque but unhatched egg (#1)

## Hastings Reservation

| | | #490 ① Mauve-DB | #491 ② Brn-Or | |
|---|---|---|---|---|
| ② | 23 May 1100 | 13.8 | 15.3 2 healed punctures in belly | |
| | 26 May 1000 | OK | OK | egg gone. |
| | 12 June 1400 (wt WL) | 98.8 89 | 93.6 89 feather on crown slightly further along than #490 | |

# Melanerpes formicivorus

## Road 3 — Hastings Reservation

(15 May) (nest watch continued):

♀265 [
57.05. ♀265 entered hole
0.00. (60.00)
3.05. ♀265 looked out. 3.07. Left hole.
3.10. Birds very upset over a Hairy Wpkr here. Chasing him off.

♂184 [
9.00. ♂184 entered hole.
23.55. Looking out 25.10. Back down.
30.55. Leaving

♀265 [
31.05. ♀265 entered
41.10. Looking out. 43.00. Back down.
52.40. " " 54.27. " "
0.00. (60.00). ♀ still in hole. Me leaving.

Totals:

| | Time inc. | Time looking out | Total in hole | # visits |
|---|---|---|---|---|
| ♂184 | 48.40 | 1.37 | 50.17 | 3 |
| ♂68 | 33.03 | 3.00 | 36.03 | 2 |
| ♀265 | 48.45 | 5.07 | 53.52 | 3 |
| Total | 130.28 | 9.44 | 140.12 | 8 |

16 May 1930. I tried but failed this evening to figure out who spends the night in the nest. Possibly I'll be able to tell early in the morning.

17 May Watched the nest here from 430-800. I failed at figuring out who roosted in the hole, but I did get a pretty good watch anyway. See back for compilation.

These birds were regularly flying up PO Hill toward Finch slightly to forage every time they left.

I also noted that when the 2 ♂♂ meet at the hole (1 inside and the other to change over with the first) they both chatter at each other, whereas this does not happen when a ♂ and ♀ meet at the nest.

? See 22 May ♂68 roosted in nest

18.45. Watching at dusk. I did a good job keeping track of the ♂♂, and though I could be absolutely positive, I am 95% sure that it was ♂68 who spent the night in the nest, while the other 2 birds both roosted in last year's nest hole. I did not see any pre-roost mounting. (I did this by being able to identify ♂184 and thereby follow ♂68 from the time he entered the hole, left, and then returned to roost). I could have inadvertantly switched birds, but I think not).

17
18 May 430-800 Nest watch (incubation)

30.00. Bird out in Perch Sycamore already!
? [36.12. Bird entered hole. (too dark to tell who)
? [37.45. 1st bird left; new bird entered.
? [56.15. Bird looking out: a ♂ 56.42. Going back down.
[59.10. ♂ left.
♀ [59.15. ♀265 entered hole
[5.00. ♀ left.
♂ [5.05. ♂184 entered
[11.25. ♂ left.
♂ [11.30. ♂68 entered
[14.55. ♂ left.
♀ [15.05. ♀265 entered.
[24.10. Looking out 26.40. Back down.
[41.35. " " 42.50. Leaving.
[43.15. ♂68 entered
[54.20. Looking out 55.10. Back down.
[59.10. " " 59.45. Left hole.
[59.50. ♂184 entered hole
[9.30. ♂ left hole.
♀ [9.35. ♀265 entered
[19.20. ♀ left
[19.25. ♂68 entered. [Did not chatter at each other]
[55.20. ♂ looking out 35.30. Leaving
[35.37. ♂184 entered. [Birds did chatter to each other]
[39.00. ♂ leaving
♀ [39.10. ♀265 entered.
[47.45. looking out 48.35. Back down
[51.55. " " 52.02. " "
[52.20. " " 52.50 " "
[55.00 " " 56.00 " "
[4.00 " " 4.55. Leaves
[5.30. ♂184 entered
[6.35. leaves.
[6.40. ♂68 entered. [♂♂ chattered at each other]
[13.30 looking out. 13.35. Leaves.
[13.40. ♂184 entered.
[37.40. ♂ leaving
[35.55. ♂68 entered.
[49.55. looking out. 50.05. Leaving hole.
♀ [52.10. ♀265 entered.
[0.00. ♀ still in hole. I'm leaving

Total time watched: 210 min

| | ♀265 | ♂184 | ♂68 | ♂? | Total |
|---|---|---|---|---|---|
| Time incubating | 69.43 | 44.28 | 55.15 | 20.58 | 190.24 |
| Time looking out | 7.07 | 0 | 1.50 | .27 | 9.24 |
| Total time in hole | 76.50 | 44.28 | 57.05 | 21.25 | 199.48 |
| # visits to hole | 5 | 5 | 5 | | 16 |

# Melanerpes formicivorus

Road 3 — Hastings Reservation

18 May 1940. I tried watching roosting again tonight, but the birds shifted around at the last minute and it was impossible to tell who roosted in the nest. In any case, the other birds (and there may have been more than 2) roosted in the '78 nest hole and the '75 nest hole, where ambushes might be in order.

19 May Tonight, employing the direct approach (I sat with the scope as close to the hole [directly below the tree] as possible) I once again was 95% sure that ♂68 ~~again~~ spent the night in the nest. ♂184 was definitely in the hole until late, at which point a 2nd bird went in. Immediately after the 2nd bird got in, a bird poked his head out, looked out for about 10 seconds, and flew off, leaving the 2nd bird in for good. Now, either ♂68 entered, turned himself around in record time, and then flew off 5 seconds later, or they changed over, leaving ♂68 in for the night. I consider it highly likely that the latter was the case.

see 22 May

♂68 roosted in nest

20 May Watched the nest this morning from 900-1200. See compilation on the back.

1940. Tonight, watching directly under the hole again, I was able to be quite certain that ♂184 roosted in the nest. In fact, after flushing the ♂ out at about 1915, ♂184 was the only bird to come to the hole, and he showed no sign of leaving by 1940 (by which time it was dark).

♂184 roosted in nest

22 May 1940. Tonight I watched again and was able to

## 20 May 900-1200 Nest watch (incubation)

✓ 0.00. ♀265 in hole
9.00. Looking out. 9.40. Leaves

✓ 11.20. ♂184 enters.
19.40. Leaves. Chatters a little at ♂68.

✓ 19.52. ♂68 enters.
29.45. Looks out 29.55. Back down
32.40. ♀265 lands at hole, does full wing-spread waka at ♂68 as he looks out.
32.45. ♂ leaves

✓ 32.52. ♀265 enters.
40.35. Looks out. 48.15. Back down.
52.30. " " 52.55. Leaves.

✓ 53.28 ♂184 enters.
0.00.
8.10. Looks out. 9.10. Leaves.

✓ 9.50. ♀265 enters.
20.35. Looks out. 21.20. Back down.
25.40. Leaves.

✓ 25.43. ♂68 enters.
34.50. Leaves.

✓ 35.05. ♂184 enters.
41.50. Looks out 42.30. Leaves.

✓ 42.32. ♀265 enters, waka as at leaving bird
54.10. Looks out. 56.05. Back down.
57.20. Leaves.

✓ 57.23. ♂184 enters.
57.55. Looks out. 5805. Leaves,

✓ 58.10. ♂68 enters.
13.35. Leaves

✓ 13.45. ♀265 enters.
26.12. Leaves.

✓ 26.15. ♂184 enters.
37.00. Leaves.

✓ 37.05. ♂68 enters. Both birds chattered at each other during the exchange.
49.20. Looks out. ~~49.58~~ Back down.
~~49.~~ 49.50
50.25. Leaves.

✓ 50.32. ♀265 enters. Gave another open-wing waka at ♂68 as he left.
0.00. ♀ still in. Me leaving.

Total time watched: 180 min.

| | ♀265 | ♂68 | ♂184 | Total |
|---|---|---|---|---|
| Time incub. | 70.51 | 50.05 | 41.04 | 162.00 |
| Time look. out | 11.25 | .40 | 1.50 | 13.55 |
| Total time in hole | 82.16 | 50.45 | 42.54 | 175.55 |
| # visits | 5 | 4 | 5 | 14 |

# Melanerpes formicivorus

Road 3 Hastings Reservation

(22 May) be quite sure that ♂184 (who was the only bird to come by the hole) spent the night in the nest. With these last 2 watches I guess I now have to question the first 2 when I was fairly certain, but not positive, that ♂68 spent the night in the nest. Until further proof I must now assume that ♂184 and he only is the one.

♂184 roosted in nest

23 May 1100. On the advice of Larry, who says for sure they've hatched here, I opened the nest and indeed found 2 small babies and 1 unhatched but opaque egg.

Watched the nest here from 1500-1745. See back for compilation.

26 May 1000. Checked the nest briefly, finding both babies fine and the egg gone.

29 May See Larry's notes concerning ♀444 and ♀446, both of whom were seen here today.

♂184 roosted in nest

At dusk, ♂184 definitely roosted in the nest.

30 May Again tonight ♂184 definitely roosted in the nest. Also at dusk here there was incredible commotion due to no less than 4 and possibly 5 or 6 birds. I have no idea if all of them roosted here or not, but it would seem as though the wayward daughters are still prone to returning home on occasion. Note that Larry saw ♀383 here today (?) as well as the other ♀♀.

♂184 roosted in nest

1 June ♂184 definitely roosted here once again tonight.

2 June And again ♂184 roosted in the nest; this time coming in for a late feeding visit and then remaining, looking out of the hole until 1955!

23 May 1500-1745 (early nestling)

♀ 0.00. ♀ in hole (♀265) [numbers refer to "bolus" size)
0.45. Looking out
4.15. Back down
14.20. ♂184 landing
14.22. ♀ left

14.25. ♂184 entered with food (3)
14.38. Looking out
16.15. Leaves

17.10. ♂184 with food. (2)
26.15. Looking out. 27.55. Leaves.

♀ 32.25. ♀265 enters. (nothing obvious in bill) (1)
43.15. Leaves

43.20. ♂184 enters with food (3)
50.55. Looks out.
53.40. Leaves

♀ 1.30. ♀265 enters (2)
10.00. ♂♀ leaves.

? 10.05. ♂? enters.
13.50. Looks out.
15.45. ♂? Leaves

♀ 29.40. ♀265 enters (2)
32.20. Leaves.

♂68 32.22. ♂68 enters
32.33. looks out
36.40. Back down.
46.30. Leaves. ♂68 chattered at ♂184

46.35. ♂184 enters (2)
48.25. leaves.

♀ 48.28. ♀265 enters (2). Waka'd + spread wings.
59.30 ♀ leaves.

59.33 ♂184 enters (3)
6.35. looks out
8.08. leaves

♂68 11.25. ♂68 enters (1)
15.47. leaves

♀ 15.50. ♀265 enters (2)
25.00. looks out
27.10. leaves

27.40. ♂184 enters (2)
39.45. looks out.
41.10. leaves

♀ 43.52. ♀265 enters (1)
45.45. leaves

45.47. ♂184 enters (2)
46.02 leaves

46.40. ♂184 enters (2)
47.00. looks out
47.35 leaves

♀ 48.00. ♀265 enters
50.00. Me leaving

Totals: Minutes watched: 170

| | ♂184 | ♂68 | ♂? | ♀265 | Total |
|---|---|---|---|---|---|
| #Time inside | 38.25 | 14.23 | 3.45 | 56.57 | 113.30 |
| Time looking out | 9.35 | 4.07 | 1.55 | 5.40 | 21.17 |
| Total time in | 48.00 | 18.30 | 5.40 | 62.37 | 134.47 |
| #visits | 8 | 2 | 1 | 7 | 18 |
| x̄ bolus size (N) | 2.38(8) | 1(1) | - | 1.67(6) | 2.00(15) |

# Melanerpes formicivorus

Road 3 — Hastings Reservation

4 June 1950. Watched here from 1530 - 1800 this afternoon - and an interesting watch it was, with all the old ♀♀ (except for ♀269) showing up and with ♀383 doing a fair amount of feeding! See compilation on back.

♂184 roosted in nest

At dusk, it was once again ♂184 for sure who roosted in the nest.

6 June 1950. ♂184 once again spent the night roosted. in the nest It would appear as though he and only he is the one to do so here, at least this year.

12 June 1400: Banded and bled the babies, who are of record weight (almost topping 100 gm!). They are now #490 and 491.

17 June Watched at dusk tonight, but noone roosted in the nest with the babies.

3 July Delete: ♀269. Moved to watched group ~ 30 April ± 1 week (see R1 notes). Still at Road 1.

♀444. Moved to watched group ~30 April ± 1 week. (see R1 notes). Things didn't work out; she "returned" here briefly at the end of May but is now very possibly floating. See Larry's R3 notes; My R1 notes.

♀383. Seen 4 March. Not here 15, 20, 23, 27 April (but note roosting on 26 April!), 2, 11, 14, 15, 17, 20, etc (see Larry's notes). Reappeared on 30 May, attended nest regularly through end (at least 19 June) → Left group about 25 March ± 2 wks Returned on 30 May. (also prob. seen at A3 on 25 April!)

♀446. Similar to ♀383, but only returned briefly on 29 May and did not stay → Left group about 25 March ± 2 wks.

4 June 1530-1800 Nestwatch
(feeding young)

0.00. Noone in hole.
+ 2.00. ♀383 feeds
2.10. Looking out.
2.50. Leaves
+ 8.00. ♂184 feeds (2) (bolus size)
12.45. Leaves.
30.00. (0.00)
+ 5.30. ♂? in hole
6.30. ♂ leaves
+ 8.30. ♂68 feeds.
9.20. Leaves.
+ 21.35. ♀265 feeds (3)
23.30. Leaves
+ 31.15. ♀265 F (3) [F=feeds]
+ 45.15. ♀265 F (2)
+ 52.15. ♀265 F (3)
+ 57.25. ♀265 F (2)
1.50. ♂184 at hole; 6.30 leaves w/o F.
+ 7.35. ♀383 F
+ 8.30. ♂184 F. Removed F.S. [F.S.=fecal sac]
♀444 sitting in granary
+ 16.15. ♀265 F (2)
+ 18.45. ♀383 F
+ 21.10. ♀265 F (2)
+ 22.00. ♀383 F (2)
+ 22.50. ♀265 F
+ 24.30. ♂184 F (3) Removed F.S.
+ 30.00. ♀265 F (2)
+ 31.00. ♀383 F (2)
32.00. ♀446(!) at hole lip; ♂68 came to her; ♀446 chattered submissively. ♀ flew off. ♂68 at lip; both then left
+ 35.10. ♀383 F
+ 38.45. ♂68 F (2)
+ 43.00. ♂68 F (3)
+ 45.00. ♀265 F
0.00. Me leaving

Time watched: 150 minutes

| | ♂184 | ♂68 | ♀265 | ♀383 | ♂? ~~♀444~~ | Total |
|---|---|---|---|---|---|---|
| #Feeding visits | 3 | 3 | 10 | 6 | 1 | 23 |
| #F.S. removed | 2 | 0 | 0 | 0 | 0 | 2 |
| $\bar{x}$ bolus size (N) | 2.5(2) | 2.5(2) | 2.4(8) | 2.0(2) | - | 2.36(14) |

# Melanerpes formicivorus

Road 3 Hastings Reservation

2 August Time to add:

♀444. This bird is still floating to some extent - note that Ron saw her at R1 and Finch on 16 July and that Nancy saw her at lower Haystack about the same time. However, she has been seen more regularly back home - on ~~#~~ 6 July, 17 July, and 18 July by Ron. (Note that Larry saw neither ♀444 nor ♀446 her during nest watches on 31 May, 1, 2, 3, 7, 8, 9, 11, 12, 13, 15, 17, 18, 19, and 20 June). Thus, ~~#~~ though she is no doubt still interested in leaving, she is presently a bird who has Returned ~1 July (±1 week).

♀446. Nearly the same story as ♀444, though in this case I don't know much about where she has been during her absences. She was back briefly on 29 May and 5 June (Larry); otherwise gone until Ron saw her here on 6 and 18 July → Returned ~1 July

25 August With Ron reporting that 7 birds roosted in the 1978 nest hole we ambushed this morning and came up with 6 - including the 3 adults (who I wanted blood from), ♀383, ♀446, and one baby. Most likely the other ♀ (♀444) is mostly out carousing again and is the 7th bird; the other baby is almost certainly gone.

10 October 1530. Passed by here only to flush a bird out of the high hole (unopened!) leaving some definite baby sounds from within! I went back to acquire the necessary equipment and returned immediately, and after something of a struggle managed to get at the 2 babies. They are about 10

(go to p. 12)

# Melanerpes formicivorus

## Road 3 Fall Nest Record

## Hastings Reservation

10 October 1615 — Hole opened; #525 ① Brn-Or — 2 babies. Eyes not quite open. ② #526

| | #525 ① Brn-Or | ② #526 |
|---|---|---|
| 10 October 1615 wt(wk) | 44.9 (21) | 47.2 (20) |
| 26 October 1555 | 83.9 (96) | 86.2 (98) |

Crown not quite as far along as #526.

# Melanerpes formicivorus

Road 3 Hastings Reservation

(10 October) days old (eyes not quite open yet) and are very nearly the same developmentally. Both were weighed and measured and returned by 1630.

This is this fall's 3rd nest now, and the latest to date.

12 October Watched the nest here from 1500-1730; see compilation on back. After this I went up closer to watch roosting, and found that

*2 birds roosted in the hole: ♂184 first, followed shortly by a 2nd, unidentified bird, presumably ♂68.

Essentially no brooding of the babies was taking place.

14 October Watched the nest from 915-1145; see compilation on back. Totals were as follows:

Total time watched: 150 min.

| | ♂184 | ♂68 | ♂? | ♀265 | ♀446 | ?? | Total |
|---|---|---|---|---|---|---|---|
| #feeding visits | 19 | 16 | 2 | 25 | 14 | 1 | 77 |
| $\bar{x}$ bolus sz | 2(4) | 2(8) | 0 | - | 2(4) | 0 | 2(16) |
| fecal sacs R. | 3 | 0 | 0 | 0 | 0 | 0 | 3 |

Acorns fed: 2 Insects fed: 12

1800. Tonight at dusk (1755) ♂184 first entered the hole, followed a minute later by a 2nd and then a 3rd bird, all 3 of whom remained up until I left!

16 October 1800. Tonight 2 birds entered the hole prior to ♂184; when the latter landed at the hole one of those inside left. Thus, apparently 2 birds spent the night in the nest this time: ♂184 plus (only presumably) ♂68.

21 October Watched here today from 930-1200. Things were still

# 12 October 1500-1730 Nestwatch

time entered (time left) who (bolus size) food material

0.00 (8.25) ♂? looking out
20.00 (23.50) ♀265 (2) Acorn bits
24.15 (24.28) ♂184 (2) ——→ w/ fecal sacs
34.20 (34.45) ♂184
34.49 (34.58) ♂68
36.02 (36.09) ♂68 (1)
38.48 (39.00) ♂184 ——→ w/ fecal sacs
41.00 (41.16) ♀265 (2) insects
54.46 (54.58) ♂184 (2) w/ fecal sacs
56.40 (57.20) ♂184
57.22 (57.30) ♂68 (2)
59.05 (59.22) ♂68
0.05 (2.35) ♂184 (2)
5.20 (5.33) ♂68 (2)
6.05 (6.16) ♀265
7.20 (7.27) ♀265
11.25 (17.10) ♂68
18.52 (18.56) ♀265 (2)
20.15 (20.23) ♂68 (1)
21.18 (21.24) ♂68
22.00 (22.04) ♂68
23.28 (23.34) ♀265
24.25 (26.21) ♂184 (1)
31.45 (33.17) ♂184
34.20 (34.32) ♀265
35.12 (35.36) ♂184 (2)
35.46 (36.04) ♀265
36.25 (36.36) ♂68 (2) insects
36.56 (37.38) ♂184 (1)
37.40 (37.50) ♀265 (2) Acorns
38.38 (38.57) ♀265
43.20 (43.30) ♀446
43.32 (43.45) ♂184 w/ fecal sacs
47.07 (47.20) ♀265
51.22 (51.30) ♀265
53.50 (54.00) ♂184 w/ fecal sacs
54.30 (55.18) ♀446 (1)
58.48 (58.56) ♀265
59.50 (2.05) ♂184
3.52 (4.15) ♂184
4.18 (4.24) ♀265
8.47 (8.56) ♂68
10.06 (11.20) ♂184 (1)
14.55 (15.09) ♂68
22.30 (27.44) ♀446
27.45 (27.50) ♂68
29.25 (30.50) ♀446 not feeding (1)
(31.00) Leaving

Total time watched: 150 min.

| | ♂184 | ♂68 | ♀265 | ♀446 | ♂? |
|---|---|---|---|---|---|
| #visits | 15 | 13 | 14 | 3 | 1 |
| x̄ bolus size | 1.6 (7) | 1.6 (5) | 2 (4) | 1 (2) | – |
| fecal sacs | 5 | 0 | 0 | 0 | – |

Total: visits: 46 (18)
x̄ bolus sz: 1.6 (23)
fecal sacs: 5

Acorns: 2
Insects: 2

# 14 October 915-1145 Nestwatch

0.00. watching. "♀" = ♀265
- 0.35. ♀
- 1.20. ♂68 (2) insects.
- 2.00. ♀
- 5.15. ♀
- 12.00. ♀. stayed. 22.00. L.O. @ 23.50. Leaves.
- 23.40. ♀446
- 24.00. ♂68
- 24.35. ♂184 (2) Acorn bits. 28.20. Leaves.
- 28.22. ♂68
- 29.05. ♀446 (2) insects
- 31.50. ♂184
- 32.35. ♂184 Removed Fecal Sacs (FS)
- 34.32 ♂184
- 37.35. ♀
- 38.00. ♀
- 39.10. ♀
- 40.00. ♂184
- 42.00 ♀
- 42.35. ♀; 49.00. L.O. 49.22. Leaves
- 50.50. ♂68
- 54.56. ♂184. 58.12. Leaves.
- 58.14. ♂68 (2) insects
- 59.02. ♀
- 3.15. ♀446
- 4.57. ♂68 (2) insects
- 6.05. ♂68
- 6.50. ♀446
- 7.45. ??
- 8.38. ♀446
- 9.28. ♀
- 12.54. ♂184
- 14.20. ♀446
- 14.48. ♀
- 16.45. ♂184
- 18.45. ♀446
- 19.00. ♂?
- 19.25. ♀
- 20.40. ♂184
- 22.00. ♀
- 23.35. ♂68 (2) insects
- 23.50. ♀446
- 24.35. ♂68
- 26.10. ♀446
- 26.30. ♀
- 27.18. ♂68
- 27.40. ♂184
- 29.15. ♂184

- 30.25. ♂68 (2) insects
- 31.05. ♂??
- 33.45. ♀
- 34.35. ♀446 (2) insects
- 35.55. ♂68 (2)
- 36.00. ♀
- 36.20. ♂184
- 37.30. ♂68 (2) insects
x 38.05. ♀446; did not feed
- 38.25. ♀
- 39.45. ♀
- 42.00. ♀446
- 45.20. ♀446 (2) insects
x 46.35. ♀446; did not feed
- 46.45. ♂184; leaves 52.30
- 49.05. ♀446 fed
- 52.34. ♀
- 54.45. ♂184
- 57.00. ♀
- 58.15. ♂68 (2) Acorns
- 59.00. ♀
- 59.30. ♂184; RFS

- 1.00. ♀
- 2.15. ♂184 (2)
- 2.43. ♂68
- 10.10. ♂68
- 15.15. ♀446 (2) insects
- 20.00. ♀
- 21.10. ♂184 (2) insects; RFS
- 24.00. ♂184 (2) "
- 26.46. ♀
- 29.32 ♂184
30.00. Me leaving

* Totals on front of page *

## Melanerpes formicivorus

Road 3 Hastings Reservation

(21 October) pretty hectic, as before. The only main difference is that ♀446 didn't show up at all today - possibly having joined in the fate of the other ♀ offspring here (i.e. immigrated). See back for compilation.

Note also the apparent dominance interaction (♂68 > ♂184!) late in the watch.

26 October 1600. Went up and banded the 2 babies, now #525 and 526. Both seemed in good shape.

27 October Watched the nest from 1300-1530; all 4 birds were back feeding. Also, the babies are old enough to occasionally be up at the hole. See compilation on back.

Totals were as follows:

N times Acorns seen fed: 11 Total time watched: 150 min.

N times Insects seen fed: 12

| | ♂184 | ♂68 | ♀265 | ♀446 | Total |
|---|---|---|---|---|---|
| N feedings | 11 | 13 | 21 | 8 | 53 |
| N FSR | 4 | 0 | 0 | 0 | 4 |
| $\bar{x}$ bolus/ft | 2.5(8) | 2.0(4) | 2.5(6) | 2.0(4) | 2.3(22) |

30 October Watched the nest from 1000-1230. ♀446 not around again. Compilation is on the back of p. 13a. The baby (ies) are getting very close to the end.

2 November 115. No sign of anyone in or interested in the nest. The babies have apparently fledged. Also counted stores, which are on the low side as expected: Sycamore 162, Valley Oak: 113 } 275

9 November 1145. Watching.

1204. ① ♀ DB/RL-LB #265. Not much action here.

21 October 930-1200 Nestwatch

A=fed acorns ; I=fed insects
-N = bolus size.
♀ = ♀265. RFS=Removed fecal sacs

0.00. Watching
- 3.35. ♂184 (I-2)
· 4.17. ♀265
× 5.29. ♂68
› 9.20. ♂68 (-2)
· 9.30. ♀
9.50. ??
· 10.15. ♀
- 11.20. ♂184
· 11.50. ♀
› 12.00. ♂68
· 13.00. ♀
· 14.00. ♀ (I)
× 14.05. ♂68 (I-2)
- 14.28. ♂184
· 14.35. ♀
› 15.15. ♂68 (I-2)
- 15.38. ♂184
· 18.00. ♀
× 18.15. ♂68 (A-3)
· 22.30. ♀
- 22.55. ♂184 RFS
× 24.25. ♂68
· 26.00. ♀
› 26.30. ♂68 (I-2)
· 27.45. ♀265
· 30.45. ♀
- 31.50. ♂184 RFS
· 36.00. ♀
- 37.55. ♂184 RFS
· 40.40. ♀
- 42.50. ♂184
· 43.18. ♀
· 44.00. ♀
- 47.00. ♂184 (-2)
· 49.10. ♀
› 49.20. ♂68 (-2)
· 50.05. ♀
- 50.20. ♂184
× 50.45. ♂68 (I)
- 52.05. ♂184 (I-2)
- 54.25. ♂184
· 55.30. ♀
· 57.18. ♀
› 58.15. ♂68
· 0.05. ♀
- 2.54. ♂184 RFS
- 3.53. ♂184 (-3)
· 5.39. ♀
· 6.10. ♀
· 10.55. ♀
· 17.48. ♀ (I-2)
× 18.10. ♂68 (I-2)
- 19.45. ♂184 (I-2) RFS
· 20.00. ♀ (I-2)
· 20.25. ♀ (I-2)
› 20.35. ♂68 (-2)
× 21.05. ♂68 (-2)
· 22.27. ♀
· 23.30. ♀
- 23.40. ♂184 (A-2)
› 24.35. ♂68
› 29.55. ♂68 (I-2)
· 30.15. ♀ (A-2)
× 33.33. ♂68 (-1)
· 34.27. ♀ (I-2)
- 35.20. ♂184 (I-2)
× 38.18. ♂68 (I-2)
· 53.05. ♀ (A-2)
- 58.40. ♂184 (I-2) RFS
· 59.10. ♀ (I-2)
› 1.13. ♂68 (I-2)
- 1.25. ♂184
- 4.28. ♂184 (I-2)
› 6.30. ♂68 (I-2)
- 11.00. ♂184 RFS
· 13.20. ♀
› 13.40. ♂68 (A-2)
· 15.45. ♀
· 16.55. ♀
17.50. ♂68 (I-1)
- 18.02. ♀
· 19.00. ♀ (I)
- 19.10. ♂184 (I-2)
› 19.45. ♂68 (A-2)

Both ♂♂ in hole. ♂184 came out; sat at edge of hole; ♂68 looked out, ♂184 turned very slightly away and chattered; ♂68 did not vocalize. Both birds left very soon thereafter, ♂184 going up the trunk and ♂68 flying out.

· 21.00. ♀
· 26.50. ♀ (I-2)
› 27.00. ♂68 (I-2)
- 27.22. ♂184 (A-2) RFS
× 28.45. ♂68 (I-2)
· 29.05. ♀
30.00. Me leaving

Total time watched: 150 min.
N times Acorns seen fed: 7
N times Insects seen fed: 27

| | ♂184 | ♂68 | ♀265 | ? | Total |
|---|---|---|---|---|---|
| N feedings | 23 | 25 | 41 | 1 | 90 |
| N F.S. removed | 8 | 0 | 0 | 0 | 8 |
| x̄ bolus sz (N) | 2.1(11) | 2(19) | 2(8) | - | 2.0(38) |

27 Oct. 1300-1530
Nestwatch

A=fed acorns
I=fed insects
♀=♀265
RFS=removed fecal sac

0.00. Watching
3.30. ♂184 (2)
8.40. ♀ (A-3)
9.00. ♂68
12.00. ♂184 (I-2)
12.10. ♂68 (-2)
22.15. ♀. Leaves 29.15
37.00. ♂184 (A-2) RFS
37.24. ♀
40.00. ♂184 (I-2) RFS
42.25. ♂68
52.20. ♂184 (I-3)
53.40. ♀
57.35. ♀
59.10. ♂68 (I-2)
59.45. ♀
1.25. ♀
18.10. ♂68 (I-)
20.00. ♀ (A-3)
21.05. ♀
21.40. ♀446
22.30. ♀
22.55. ♂184 (A-3) RFS
23.20. ♂68 (Noctuid?)
23.35. ♀446 (Moth I)
24.00. ♀ (I-2)
25.00. ♂68
30.40. ♀
33.50. ♀
34.00. ♂68
37.10. ♀
39.00. ♀ (A-3)
40.40. ♂68 (More or less displaced ♂184 from hole, the latter of whom had landed 1st)
41.15. ♂184) RFS
50.20. ♂184
51.55. ♀ (A-2)
52.45. ♂184 (A-3)
56.30. ♂68 (I (Moth) - 2)
0.40. ♀446 (I-2)
1.40. ♀
2.00. ♀446 (I-2)
2.10. ♂68
4.20. ♂68
6.05. ♀
6.50. ♀
7.25. ♀
9.11. ♀ (A-2)
12.55. ♀446
13.25. ♂184 (A-)
15.20. ♀446 (A-2)
16.40. ♀446 (A)
27.40. ♂184 (I-3)
28.30. ♂68 (I-3)
28.40. ♀446 (-2)
30.00. Me leaving

♀446 chatters as ♀265 comes

1979 Walter D. Koenig



# Melanerpes formicivorus

Road 3

Hastings Reservation.

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30 Oct. 1000-1230 Nestwatch

I = fed insects
A = fed acorn bits
♀ = ♀265 RFS = Removed fecal sac

000. watching
· 18.45. δ184 (A-2) RFS
- 20.00. δ68 (A-2)
· 20.27. δ184
· 27.10. δ184
27.30. ♀ (I-2)
- 29.50. δ68
30.20. ♀
· 31.20. δ184 RFS
· 33.35. δ184 (A-3)
33.42. ♀ (A-2)
- 33.55. δ68
· 34.10. δ184 (-2) RFS
34.45. ♀ (A-2)
· 34.48. δ68 (-1)
39.50. ♀
· 41.50. δ184
47.35. ♀ (A-2)
- 48.35. δ68
50.00. ♀
- 50.10. δ68 (I-2)
52.35. ♀
- 53.30. δ68 (I-2)
55.20. ♀
- 59.35. δ68
· 13.50. δ184 (I-1)
13.55. ♀ (I-2)
- 14.57. δ68
· 15.55. δ184 RFS
17.30. ♀ (I-2)
· 185. δ184
19.30. ♀ (I)
- 19.35. δ68
22.10. ♀
- 22.40. δ68
23.20. ♀ (I)
23.40. δ68 (A-2)
- 25.40. δ68
26.20. ♀
30.35. ♀
· 31.05. δ184 RFS
- 31.22. δ68
33.30. δ68
35.00. ♀
35.50. ♀
- 36.30. δ68
36.45. ♀
37.20. ♀
· 37.50. δ184 RFS
38.30. ♀
42.45. ♀
46.10. ♀ (A-3)
- 47.10. δ68
· 50.10. δ184 (A-2) RFS
52.05. ♀
52.55. ♀
- 53.35. δ?
54.45. ♀
- 54.50. δ68
55.35. ♀
56.35. ♀
57.25. ♀ (I-2)
58.20. ♀
· 58.40. δ184 RFS
- 59.10. δ68
· 0.30. δ184 RFS
- 2.35. δ68
· 4.15. δ184 RFS
10.25. ♀
- 11.15. δ68
12.25. ♀
13.10. ♀ (I-2)
14.10. ♀ (I-2)
· 14.45. δ184 (I-2) RFS
15.15. ♀
17.55. ♀
- 18.30. δ68 (I-2)
18.45. ♀ (I-2)
19.40. ♀ (I-2)
20.35 ♀
21.40. ♀ (I-3)
23.10. ♀
24.30. ♀ (I-2)
25.20. ♀ (I-2)
30.00. Me leaving

Total time watched: 150 min
# times insects seen fed: 18
# times acorns seen fed: 8

| | δ184 | δ68 | δ? | ♀265 | Total |
|---|---|---|---|---|---|
| Fed | 17 | 22 | 1 | 43 | 83 |
| FSR | 11 | 0 | 0 | 0 | 11 |
| x̄ bolus sz | 2(6) | 1.8(6) | - | 2.1(15) | 2.0(27) |

# Melanerpes formicivorus

Road 3 Hastings Reservation

(9 November) 1210. ②♂ DB/DB #68 in Valley Oak ~~in~~ on PO Hill side of gate.

1220. ③♂ M/B-W #184 in granary.

1230. ④♀ DB-WH(W)/or #444 (!!) In the granary. Where was she during the nesting period?

1300. Leaving. No sign of any babies anywhere, but the birds are clearly spending most of their time elsewhere.

18 December 1100. Watching. ①j WH-LB #526 (still ♂-type) pounting away at an acorn in the nest tree. ③♂ WH-B/B-WH #184 eating an acorn over across the creek.

1115. There seems to be no big rush to get censused by anyone else. At least one of the fall babies is still around, however. Going to count stores.

Counted stores: Sycamore: 605 } 927. Still room, esp. in the Valley Oak.
Valley Oak: 322 }

I also nabbed a sample of 55 acorns, replacing them with my own.

# Melanerpes formicivorus

School Hill — Hastings Reservation

6 January 1100. Flushed 1 bird as I came down to count stores: 162 (all in tree 2). Also took my sample of 25 acorns, returning a much ~~juic~~ juicier ~~set~~ in their stead.

5 February 1530. Watching.

1600. ♂ down below the granaries hawking.

1620. Finally: ♂ LP/M #86; got him when he flew down to chase a junco out of tree 2. Leaving. Still noone else here.

17 February 1440. 1 ♂ here when I came to count stores: 123.

12 March 1430. ♂ LP/Light #86 sitting in the low perch tree behind the storage area.

1545. Finished redoing the hide. No activity up here to lead me to suspect that anyone besides ♂86 is living here.

There are still some stores remaining here.

27 March Ron noted ♂86 (and he alone) up here today, sapsucking in a Blue Oak in the forest towards Red House from the hide.

9 April This afternoon I walked up the check the Malaise trap and noted 1) there appear to be no stores remaining here, and 2) a ♂ was in the '75-6-7 nest hole roosting early.

10 April 1430. First I added 106 acorns to the granary here (which was indeed out) and then looked over at the old nest hole only to discover a ♀ looking out!!

12 April 1120. Watching from hide.

1132. ♂ down in the perch tree below the granary. Flew off.

1200. Carrick? Maybe someone in the granary. Someone is Carricking from down the hill a ways. Still don't see him.

1225. Have been watching [the] ♀, who played around in the area where I added stores, drank from a knothole,

## Melanerpes formicivorus

School Hill — Hastings Reservation

(12 April) flew over to the '78 nest hole, flew to next tree, was briefly joined by a second bird, then flew to sapsucking tree up by the hide, sapsucked for 10 minutes, returned to granary, Carricked once or twice, then eventually flew down the hill. I never got a look at her left leg, but she was indeed banded and seemed definitely to have been ♀ White/DBlue #260 [formerly?] from 1800. Don't know what's up, of course (remember that ♀260 may originally have come from School Hill) but it looks interesting. ♀260 "inexplicably" switched groups once and for all I know may be doing it again.

1240. Leaving. This group should be rechecked soon, however.

1315. ♀260 Definitely here at 1800, but an intruding ♀ does suggest that she had left for at least awhile this morning. See 1800 notes.

20 April 1615. Watching.

1630. A ♂ is alone in the perch tree below the granary area.

1633. A ♀ (♀ won/M #260?) flew into tree1 and sat for several minutes. Then a 3rd bird started calling off in the forest toward 1800 which prompted first the ♀ to fly off in that direction and then the ♂ to go over on that side from the other side, where he'd probably been sapsucking. I didn't see the 2 together.

1643.! 2 ♂♂ together now in the tree off to the side. Now a chase (whew!). ♀ now on upper side to the S of the hide.

1650. Something definitely up. 3 birds over in S side now; one appears to be ♂86, another with a billfull of catkins.

# Melanerpes formicivorus

School Hill — Hastings Reservation

(20 April) 1710. Returning to this side tree: ♂ Yel/Red ? #402 !! I have no idea who this might be.

1715. Clearly some odd shenanigans are going on here. A good watch on a nice day is needed.

* ! The ♂ above is most likely ♂ Yellow/DPink #402, a baby here back in 1977 and last seen here last spring (check notes about this).

21 April 840. On arrival, a ♀ was sitting in tree 1: ① ♀ White/DB + Light/Light #260. After about 5 min., she flew down to a Valley Oak below the '78 nest tree and joined a ♂: ② ♂ Mau/Mauve LP/M #86. Both sat on top of this tree together for several minutes eating catkins. About 850 a 3rd bird, above me on the hill, gave several Garricks, prompting both these birds (as far as I could tell) to go up and displace him/her. A couple minutes later ♂86 was sitting in tree 1 again.

855. Nobody here now.

857. ♂86 in top of sap tree.

920. Both ♂86 and ♀+260 in tree 1 again; greet each other when they meet. ♀ apparently eating an acorn bit (may have stores remaining from those I gave them).

925. Both birds just flew very far up - ~150 ft, and caught large black beetles, presumably Calosoma. Quite impressive, really. They obviously know what they're after when they fly off the perch, even when it's way far away.

930. Leaving. Looks like ♀+260 may truly have moved - she is definitely at home here. There is still at least 1 intruder hanging around. Otherwise, no sign of ♂402 today.

# Melanerpes formicivorus

Schod Hill — Hastings Reservation

(21 April) 935. Scratch that. A ♂ is in the tree above the exclosure and is ♂ Yel/Yel Red #402. He is hawking and gives occasional Garricks.

950. ♂402 flew down to lower area. No obvious chasing has occurred and his Garricks were not acted upon. Hmm. Is he returning here? If so, why does he Garrick and act like an intruder? What's his status with the other 2 birds (♂86, remember, is presumably his father or uncle).

1000. Now leaving. This is pretty interesting. Might be worth watching roosting to see if 2 (3?) birds are roosting here.

1003. Several questions solved: All 3 of these birds - ♂, ♀, and ♂ Yel/DP #402, are peacefully coexisting in a Valley Oak down below the exclosure eating catkins. It would appear as though ♂402 is rejoining this group as well. Dach interestant! No agression resulted from this, though each was only several feet away from the others.

24 April 1750. Noone in any holes.

29 April Add: ♀260. Moved as adult 3 April (see ~~1800~~ notes)

2 May 1130. Checked '77 (etc.) nest hole - bottom ok but no eggs (Larry reported a bird in here last week).

7 May 1905. Late this evening I came up and shouted at the '77 hole to no avail. But I did scare a bird from the storage area, who flew up to the top of the exclosure and then, after several minutes, returned and roosted in the hole (alone, as best I could tell).

# Melanerpes formicivorus

School Hill — Hastings Reservation

8 May 1400. Nobody in any of the principal holes.

15 May 1345. Still nobody in any holes, even though 1 bird has been roosting in the old nest hole.

Note Ron's observation of all 3 birds (inc. ♂402) here on 11 May.

19 May 1045. Noone in any holes here. A ♂ sitting up in the top of the first tree of the exclosure, however.

20 May 1900. Larry reported a bird in the '75-'77 nest hole this morning, so I checked it, and sure enough they have 4 eggs.

23 May 745. ♀ in hole. Also in the hole were the same 4 eggs, which I measured and returned.

27 May Ambushed the non-nest hole (last year's nest hole) and nabbed ♀260 and ♂402 this morning. Thus, I presume that ♂86 roosted in the nest last night, plus with the markings I added to the birds hopefully we'll be able to tell who roost here in the future as well.

♂86 roosted in nest (26 May)

28 May Watched the nest today from 1045-1335. The old ♂ (♂86) didn't show up at all.

31 May Watched the hole here from 630-930. The young have definitely hatched here (Nancy, as it turns out, noted feeding visits last night). See compilation on back.

3 June 1730. Checked the nest, where there are 3 babies and no sign of the 4th egg.

7 June Watched the nest from 1600-1715 but saw nothing after inadvertantly flushing a brooding bird (probably ♂402!) out of the nest after 30 minutes! I did check stores, and honestly can find none that remain intact. ⇒ ○. (go to p. 7)

27 May 1045-1335 Nestwatch (incubation)

0.00. ♀260 in hole, looking out.
3.00. Back down.
15.00 (0.00)
- 0.40. Looking out.
- 10.30. " "
- 20.00. " "
- 31.00. " "
- 46.15. " "
- 2.00. Back down.
- 12.00. " "
- 20.35. " "
- 31.30. " "
- 47.10. Leaves.

60.00 (0.00)
- 58.00. ♂402 enters.
  - 0.00
  - 6.40. ♀ enters hole.
  - 6.47. ♂402 leaves
  - 35.00. ♀ still in hole. Me leaving

Total time watched: 170 min

| | ♀260 | ♂86 | ♂402 | Total |
|---|---|---|---|---|
| Time incubating | 82.40 | 0 | 8.47 | 91.27 |
| Time looking out | 7.50 | 0 | 0 | 7.50 |
| Total in nest | 90.30 | 0 | 8.47 | 99.17 |
| #visits | 1 | 0 | 1 | 2 |

31 May 630-930 Nestwatch (nestling)

✓
- 30.00. ♀260 in hole
- 32.00. Looking out
- 54.00. Flew out

60.00 (0)

✓
- 5.00. ♀260 enters.
- 15.40. Leaves.

- 15.43. ♂86 enters. Waka'd to each other softly

✗
- 23.15. Looks out.
- 24.10. Back down
- 25.50. Looks out
- 26.25. Back down.
- 37.15. Looks out.
- 38.10. Leaves

0.00

✓
- 4.43. ♀260 enters
- 7.20. Leaves.

- 7.23. ♂86 enters. Soft wakas during exchange

✗
- 21.20. Looks out
- 22.00. Back down.
- 22.25. Leaves.

•
- 22.50. ♂402 enters, looks out
- 23.38. Leaves

•
- 24.40. ♂402 enters, looks out. Chased a Nuthatch out of nest tree.
- 26.12. Leaves,

✓
- 26.15. ♀260 enters. Again soft wakas to each other.
- 35.05. Leaves

•
- 35.07. ♂402 enters (2)
- 35.30. Looks out.
- 36.00, Back down
- 38.35. Leaves

✗
- 38.38. ♂86 enters (2). Soft wakas; no chattering
- 42.20. Looks out.
- 42.32. Back down
- 58.10. Looks out.
- 59.30, Back down.
- 1.05. Leaves.

✓
- 1.10. ♀260 enters (2)
- 26.45. Looks out
- 27.20. Leaves.

30.00. Me leaving

Total time watched: 180 min

| | ♂86 | ♂402 | ♀260 | Total |
|---|---|---|---|---|
| Time down in hole | 55.19 | 2.58 | 49.42 | 107.59 |
| Time looking out | 4.27 | 2.50 | 22.35 | 29.52 |
| Total time in hole | 59.46 | 5.48 | 72.17 | 137.51 |
| #visits | 3 | 3 | 5 | 11 |
| x̄ bolus size (N) | 2(1) | 2(1) | 2(1) | 2(3) |

# Melanerpes formicivorus

## School Hill Nest Record

## Hastings Reservation

19 May 1045 — Noone in nest hole

20 May 1900. — Bird in hole. Hole opened; 4 eggs, fresh, numbered 1-4.

23 May 745 — Still 4 eggs:
① 27.3 × 20.6
② 26.7 × 20.6
③ 25.9 × 20.8
④ 25.9 × 19.7

30 May — Babies hatched

3 June 1730 — Hole opened: 3 babies, no sign of 4th:

| | ① LB-Y | ② Or-BP | ③ |
|---|---|---|---|
| 3 June 1730 | 18.3 | 14.0 | 12.3 |
| 12 June 1315 | 65.2 [27] | 53.8 [23.5] | 54.2 [21.5] |

18 June 1550 — Nest failed. All 3 babies dead in nest. See notes.

# Melanerpes formicivorus

School Hill — Hastings Reservation

12 June 1315. Checked and measured the babies, all 3 of whom are fine, and moved the photocell device down next to the hole and almost ~~ready to~~ in place to activate.

13 June 1315. Checked the babies again, who are still fine. They hadn't gained much weight, however, so I moved the device back up several inches just to be on the safe side while I'm gone.

18 June 1550. Despite the fact that the babies were getting fed as of 2 days ago (see Nancy's notes), the nest has failed. All 3 babies were in the nest, quite starved. Even though it would appear as though the camera contraption was not the cause of this failure, it's clear that I can't trust it yet at this point. In any case, this nest is defunct.

3 July Change: ♂402. First seen here on 20 April, at which time he appeared "new." Returned ~ 20 April.

31 August 1300. On my way back from School Hill West I decided I should check here just in case. Et voilà – a bird flushed out of the nest hole, which contained 2 cold eggs! The 1980 breeding season is on!

1 September See Ron's notes concerning his watch this morning, which included seeing the ♀ go in and lay the 3rd egg! Later in the afternoon Nancy put in a watch as well.

1715. Watching. Nothing at the moment.

1740. ♂1 bird up at SH "B". Going up. Noone when I arrive.

1750. Still zero. Going back down to main area. Non! ♂ Yel/DP #402 up here by himself. 1753. Joined by ♀260. Subsequent observations put on tape as follows:

(go to P. 9)

# Melanerpes formicivorus

## School Hill Fall Nest Record — Hastings Reservation

| | |
|---|---|
| 31 August 1300 | Bird in hole; 2 eggs, cold. |
| 1 September | 3rd egg laid (see Ron's notes) |
| 2 September 715 | Checked nest: 3 eggs, cold |
| | ① 26.0×20.3 |
| | ② 25.6×19.8 |
| | ③ 26.0×20.1 (the new one; had a hole 7×5mm in shell; covered only by the membranes). |
| 1725 | 4 eggs now. Noone roosted in nest tonight. |
| 3 September 1730 | 3 eggs; broken one (#3) gone |
| | ④ 26.0×19.7 |
| | #3 had broken and was reported still in nest by Ron at . Gone entirely at 1730. |
| 13 September 930 | Still 3 eggs, no hatching yet |
| 1815 | " " " " " " |
| 14 September 1030 | Still 3 eggs, no sign of hatching. #1 appears infertile; #2 & #4 good. |
| 1745 | Still no sign of hatching |
| 15 September 830 | " " " " " |
| 1800 | " " " " " |
| 16 September 1400 | " " " " " |
| 17 September 730 | Eggs hatching: #1: No hatch |
| | #2: pipping |
| | #4: hatched; baby wt 3.9gm |
| 19 September 630 | Two babies (#2, #4), 1 egg. |

## Melanerpes formicivorus

Hastings Reservation

| School Hill Fall Nest Record | #523 [3.9 gm on 17 Sept. 730] ① L, head, tail (from egg #4) | #524 ~~Blkwt~~ ② R, leg, foot, heel (from egg #2) | ③ |
|---|---|---|---|
| 19 September 630 | 7.9 gm | 10.0 | egg unhatched |
| 21 September 1300 | 17.0 | 20.9 | egg removed by me |
| 22 September | see notes. | | |
| 25 September 1200 | 23.5 | 35.2 | |
| 29 September 1100 | $36.0^{19}$ | $50.0^{21}$ | (wt WL) |
| 1 October 1800 | $53.0^{23}$ | $69.3^{26}$ | |
| 6 October 800 | $80.2^{47}$ ← ? → | $70.6^{41}$ | (I suspect these 2 days may have seen the babies mixed up) |
| 9 October 715 | $83.9^{63}$ | $75.5^{58}$ | |
| 13 October 1645 | $80.6^{83}$ | $90.8^{87}$ | |
| 21 October 1710 | Both babies still not fledged. | | |
| 22 October 1015 | Neither baby fledged yet! | | |
| 23 October 1700 | Both babies fledged by now at last. | | |

13 Oct. 79 Babies mixed ???

13 Oct.: The measurements for 6 and 9 Oct. appear unlikely; I thus suspect I may have mixed them up on those 2 dates. I had them right on 13 Oct. for sure.

# Melanerpes formicivorus

School Hill Hastings Reservation

(1 September) [transcribed notes]:

1753. (♀260 just flew up to the SH"B" tree, near where ♂402 was sitting). No vocalizations. ♀ hopped up her limb. Both sitting quietly ~10' apart.

* → 1754. ♀ flew off to trees. ♂402 did not follow. Still in granary.

1755. ♂402 flew off to same area where ♀ went.

1759. ♂86 high in SH'B' granary by himself. 1800. 2nd bird [♀260] flew in low to a low limb below the ♂. Wakas (soft) between ♂86 & ♀260.

1801. ♂402 flew in and landed right above ♂86. Both sitting right next to each other: ♂86 ~~♀260~~ ♂402 (horizontal)

*→ 1810. ♂402 flew down to ♀ - ♂86 followed immediately behind him. Missed the exact interaction but both ♂♂ flew off within 5 secs. Could have been a broken up mounting attempt. ♀ remains.

1817. ♀ still sitting low in tree.

*→ 1820. Poof! All 3 birds low in the tree together. Both ♂♂ flew off again within seconds.

1822. ♂86 ~~high~~ low in tree; ♂402 ~~low~~ high in tree; ♀ high in a separate part of the tree.

1823. ♀ disappeared. ~~♂86 gone also~~. ♂402 still here; ♂86 here also.

*→ Now ♀ back, right next to ♂402. ♂402 gave a few soft wakas, ♂86 flew up right away, almost "herded" ♂402 away from the ♀ but w/o physical contact.

1829. All have disappeared.

1828. All 3 flew off to top of SH field (2m, 2m) in fair "pack" style.

1830. The 2 ♂♂ in the big Valley Oak at the top. Both apart. No sign of the ♀.

*→ 1835. ♂402 flew off to the W. forest; ♂86 followed immediately.

## Melanerpes formicivorus

School Hill — Hastings Reservation

(1 September) This about ended our watch. The birds apparently roosted somewhere back in the canyon West of the field: essentially terra incognita. One bird returned briefly at about 1900 to the granary area, but it was much too dark to figure out much.

Note: ♂886 was watching ♂402 carefully and not letting him get alone with the ♀.

② ♂402 took the initiation in going places - ♂86 just tracked him (seen twice).

③ Neither was tracking the ♀.

Clearly ♂86 is concerned about ♂402. Unfortunately there were no unambiguous dominance interactions but the "herding" at 1823 may indicate ♂86's dominance. But unlike previous watches elsewhere, the ♂♂ seem to be keeping an eye on each other (mainly ♂86 → ♂402) rather than on the ♀.

2 September 715. Opened the hole, finding the 3 eggs, still cold and unincubated. The 2 marked ones were fine. The 3rd had a large hole in the shell and a crack emanating from it; the hole was covered with membranes, but they too had a small slit in them through which some air was leaking in. This egg surely won't make it, but I returned it for now anyway.

1725. Checked the nest again only to find 4 eggs. The clutch is not complete yet! Now off to find the birds. At least 2 sitting above the exclosure (the ♀ plus one ♂). Flushed as I went up. Now I'm going up to SH'B' area, where they seem to have retired. Transcribed notes from there are as follows:

1730. All 3 here at SH'B'. ♀ on left; ♂86 facing away; ♂402 further

# Melanerpes formicivorus

## School Hill — Hastings Reservation

(2 September) over; all separated. ♂86 drilling on green acorn.

1735. ♀ flew in between the ♂♂. ♂402 flew across to other side. ♀ moved toward ♂86; ♂86 moved over. Now ♂402 on left, ♀ in middle eating acorn, ♂86 on far right. Still separated. ♀ flew to left hand limb; ♂402 moves away toward ♂86. Now sitting just below ♂86.

* ♂86 1st, then ♀, then ♂402

1738. ♂86 flew down somewhere; others remain (separated by ~10')

1739. ♀ flew off in same direction as ♂86. ♂402 here alone for ~15 seconds, then he flew off as well.

1741. ♂86 seen in Blue Oak below granary.

*→ 1743. ♀ returns w/ acorn, followed immediately by ♂402, also with an acorn; then within a few seconds ♂86. ♀ flew to left; ♂86 high, ♂402 high to right. ♂402 storing ½ acorn here. More switching. ♂86 goes down and eats part of ♀'s acorn after she leaves.

1750. All still sitting. 1800. Ditto.

both watching the ♀ *→ 1809. Pre-roost mounting! ♂86 flew up toward (by) the ♀. Just as he got near her, ♂402 flew over. With all 3 together, ♂402 hopped on top of ♂86, and the ♀ hopped on the back of ♂402, creating a true ménage à trois for 1-2 seconds. Immediately following the dismounting ♂402 hopped on the back of the ♀ briefly, following which both ♂♂ moved off. This included nothing remotely resembling a copulation. Now all sitting separately again.

*→ 1810. ♀ flew off. Both ♂♂ remaining, ♂402 flew off, followed 5 sec. later by ♂86. ♀

*→ 1811. ♀ returned, ♂86 right on her heals, 2' away. 15 sec. later joined by ♂402, who landed in between the ♀ and ♂86.

*→ 1813. ♂402 flew off, leaving the other 2. ♀ followed 10 sec. later.

# Melanerpes formicivorus

School Hill — Hastings Reservation

(2 September) ♂86 here alone, preening!

1817. ♂86 flew off up hill; at least one other bird up here. That's it; they lost themselves when I approached.

Later Ron saw the 3 birds flying in true "pack" formation several times just as it was getting dark. I watched the nest until 1845 or so and saw no evidence of anyone roosting in it as yet.

Though the situation is hardly clear-cut, it is still ever more obvious that the ♂♂ are watching the ♀ closely, and that the 3 birds are hanging out together in a way which only seems to occur during the "egg-laying" period. Certainly both are potential mates for ♀260. Given that, however, it continues to amaze me how peaceful the ♂♂ are to one another! No sign of aggression or dominance at all, thus far.

3 September 1730. Checked the nest: only 3 eggs, one new. The one with the hole apparently broke (see Ron's notes); it was gone entirely this evening. No one flushed from the hole when I came, but the eggs weren't entirely cold so some incubation may have begun.

1745. Walked up to SH'B' but no sign of anyone here this time.

1802. Found ♂86 sitting in a Blue Oak down by the old wagon road below the field. Watching.

1803. ♀260 joined him, landing ~2' away.

1806. ♂402 joined them, landing ~2" away from ♂86; gave soft wakas on arrival. Then flew to limb 15' away. Now back ~1' from ♂86. Now all 3 here. ♂402 and ♀ preening. ♀ ~5' from ♂86.

## Melanerpes formicivorus

School Hill — Hastings Reservation

(3 September) 1808. ♂86 flew off.

1809. ♂402 flew off in same direction; only ♀ remains.

1810. ♂86 back here below the ♀. ♂86 eating acorn ~6' below the ♀.

*→ 1826. ♂402 returned. Hopped up trunk to ♀. Hopped on back of ♀ in pre-roost mounting. ♂86 here immediately. ♀ moved away after only 1 sec. or so. Now ♀ below ♂402 who is below ♂86.

1827. ♀ flew down and off.

*→ 1834. Both ♂♂ flew off simultaneously. All are now lost.

←→ Later at 1845 I happened to see all 3 birds fly by me in a "pack" while over in the canyon where we thought they might be roosting. They appeared to be headed toward the field. Back up there, noone was in evidence, nor was anyone in any of the roost/nest holes. Nor could I find anyone back down by the wagon road. Thus, their roost hole remains a mystery. Also, it would appear as though incubation has not begun as yet.

13 September 645. ♂402 at Y looking interested. See Y notes.

700-915. Watched the nest but saw almost nothing. ♂86 was in when I arrived looking out at me - a position he maintained for 31 minutes before leaving. Later the ♀ (9260) sat at the lip for a minute, but flew off without entering. That was it.

At 930 I checked the nest with my mirror and found all 3 eggs intact with no obvious hatching activity as yet.

1815. Returned at dusk to 1) check eggs (still 3, no sign of hatching) and 2) watch roosting (♂86 roosted in nest for sure).

*♂86 roosted in nest

14 September Watched the nest from 800-1030 - see back. Also checked

13 Sept. 700-915

0.00. ♂86 looking out
31.00. ♂flew out
45.00. ♀260 at lip.
46.30. ♀left w/o entering
0.00
0.00.
0.15. Meleaving

| | ♂86 | ♀260 |
|---|---|---|
| Incubating | 0 | 0 |
| look. out | 31.00 | 0 |
| #visits | 1 | 0 |

Time watched: 135 min

14 Sept. 800-1030

0.00. ♂86 looking out
30.15. Went down
38.00. LO (looking out.)
40.20. Back down
4215. LO
43.45. Back down
48.25. ♂260 entered
48.30. ♂LO
49.40. ♂climbed out.
50.20. ♀LO; ♂still below hole
54.30. ♂left entirely
13.15. ♀went back down
19.45. L.O.
21.20. Back down
31.30. LO
34.15. Back down
40.30. LO
43.15. Back down
49.40. LO
51.45. Back down
53.30. L.O.
54.10. Back down
0.15. LO
1.30. Back down
2.15. LO
2.45. Back down
8.15. LO
9.30. Back down
14.20. LO — 85.
15.30. Leaves
30.00 Meleaving

| | ♂86 | ♀260 | Total |
|---|---|---|---|
| Inc. | 14.25 | 50.10 | 64.35 |
| L.O. | 35.15 | 36.55 | 72.10 |
| Total | 49.40 | 87.05 | 136.45 |
| #visits | 1 | 1 | 2 |

Time watched: 150 min.

# Melanerpes formicivorus

School Hill — Hastings Reservation

(14 September) the nest at 1030, which still showed no sign of hatching. I also examined the eggs, 2 of which (2&4) looked opaque and good, while #1 appeared not to have developed.

There were 3 birds in the area this morning, presumably indicating that ♂402 was back up here somewhere. He did not come to the nest, however.

1745 Flushed the ♀ out of the nest to check in: still 3 eggs and no sign of hatching as far as can be seen through the ~~mirrored~~ mirror.

15 September 830. Flushed a bird from the hole to check the nest: still 3 eggs with no overt sign of hatching.

1800. Still 3 eggs and no sign of hatching. Looks bad.

16 September 1400. Flushed the ♀ from the hole - still 3 warm, unhatched eggs.

17 September 730. Finally! Egg #4 has hatched, leaving a baby weighing 3.9 gm. Egg ~~#2~~ #2, meanwhile, is pipping, and will hatch within the next several hours. Egg #1 is not going to hatch, as expected. I marked the baby with several spots of white-out on his skull, left wing, and left femur for identification later.

19 September 630. Checked the nest, which has 2 babies and the unhatched egg still. Note: the baby who hatched first out of the last-laid egg (#4) already (?) weighs less than the latter baby who hatched out of egg #2 (for sure). Both were marked with more white out (which did not work very well, but only well enough to identify the 1st baby after close examination) and returned.

21 September 1300. Checked the nest, weighing the 2 babies, removing the 3rd, unhatched egg (#1), and putting a band on the larger baby.

# Melanerpes formicivorus

School Hill — Hastings Reservation

(21 September) (Once again the "white-out" markings worked - but only barely. The babies are now large enough to put a band on).

The unhatched egg did not contain a visible embryo and was apparently infertile.

1855. A minor disaster here when I returned late this evening to watch roosting and apparently managed to scare off the roosting ♂ entirely - a first. I waited until it was truly dark and impossible(?) for the bird to come without bursting through the night, and then went up and brought the 2 babies home.

22 September 550. After keeping the babies warm all night on a hotpad and feeding them well I returned them to their hole. Two birds were in the vicinity and noted my presence with Karnit-cuts.

1430-1645. Watched the nest:

Total time watched: 135 min.

| | Inc. | look out | Total |
|---|---|---|---|
| ♀260: | 0 | 35.37. | 35.37 |

000. ♀ looking out
30.00. Still looking out
5.37. ♀ left
5.40. ♂ landed w/ food but spooked and left.
000.
45.00. Nothing.

1700. Checked the nest. Both babies were ok.

23 September 930. Watching nest (compilation on back).

1100. Going to check the nest.

Oops! Things aren't so bad after all - the ♂ is in the nest and looked out when I approached! I did not check the nest. But I had better watch the nest more carefully from now on!

24 September After some more bumbling about I finally got in a 90 minute watch from 1100-1230 (see back).

25 September Watched the nest from 845-1145 (see compilation on back). Afterwards I checked the nest and weighed the 2 kits.

23 Sept. 930- Nestwatch

0.00. Noone in hole.
30.00 → 0.00. Still zero.
000. Still 0. Leaving.

24 Sept. 1100-1230

0.00.
51.45. ♂86 enters (bolus 3)
0.00
30.00. Me leaving. ♂ still in hole.

Total time: 90 min

| | ♂86 | ♀260 |
|---|---|---|
| Time in | 38.15 | 0 |
| Time L.O. | 0 | 0 |
| #visits | 1 | 0 |
| Bolus | 3 (1) | 0 |

25 Sept. 845-1145

0.00. Watching (♂ in hole)
36.00. ♂86 looking out
39.00. Back down
40.10. LO
41.15. Left.

1hr —
39.15. ♂86 enters (bolus 3 - acorns)
48.15. ♀260 at hole (bolus 1)
48.50. ♀ enters
49.00. ♂ L.O.
49.10. ♂ leaves

2hr —
56.30. ♀ L.O.
9.15. ♀ back down
42.30. ♀ L.O.
2.43.00. ♀ leaves

59.50. ♂86 enters, feeds
60.00. ♂ leaves
Me also

| | ♂86 | ♀260 | Total |
|---|---|---|---|
| Time in. | 47.05 | 40.55 | 88.00 |
| Time L.O. | 4.15 | 13.15 | 17.30 |
| Total in | 51.20 | 54.10 | 105.30 |
| #visits | 3 | 1 | 4 |
| ∑ bolus | 3(1) | 1(1) | 2(2) |

Time watched: 180 min

# Melanerpes formicivorus

School Hill — Hastings Reservation

29 September — Watched the nest from 800-1600 - but saw little, as the birds here seem to remain extremely shy. ♂402 was here, however, and provided the only brooding visit of the morning. See compilation on back.

Afterwards I checked the nest and measured the babies.

1840. Tonight at dusk I watched from the hide only to find that noone roosted in the nest again (at least by the time it was definitely dark)! And this time I can't imagine that I scared the bird off, since noone even approached the hole. This is a first - and I'm particularly impressed that the babies are still making it with treatment such as this.

30 September — 810. Walked by and heard noises still coming from the nest.

1 October — 1800. Checked the nest, where both babies are doing just fine!

6 October — 800. Checked and measured the babies, who are still fine!

9 October — 715. " " " " " " " "

715-945. Watched the nest (150 min), managing to see no feeding visits at all. These birds are definitely causing problems.

13 October — Watched the nest from 1430-1630, again with no feeding visits, though at 1625, ♂402 flew into the nest tree with a load of insects before shying off. This group is clearly hopeless to get any further data on; I have no idea why they're so wary but there's no doubt but that they are.

At 1630 I went over to band the babies, who are now #523 and 524.

15 October — Watched the nest this morning from 900-1130, seeing a

29 Sept. 800-1100 Nestwatch

000. Watching (♂402 inside)
6.00. ♂ looking out
10.00. Left hole
56.00. ♂86 at hole with food, but left w/o entering.
0.55. ♀260 enters (bolus 2)
1.02. ♀ leaves
0.00
0.00 Me leaving.

Total time watched: 180 Min

| | ♂86 | ♂402 | ♀260 | Total |
|---|---|---|---|---|
| Time brooding | 0 | 6.00 | 0.07 | 6.07 |
| Time looking out | 0 | 4.00 | 0 | 4.00 |
| Total in hole | 0 | 10.00 | 0.07 | 10.07 |
| # visits | (1) | 1 | 1 | 2 |
| x̄ bolus size | - | - | 2(1) | 2(1) |

## Melanerpes formicivorus

School Hill — Hastings Reservation

(15 October) grand total of 2 feedings, both by ♂402 (bolus size of 2 both times; insects). Neither of the other 2 birds came by at all.

After this I counted stores:

Tree 1: 3
Tree 2: 193
} 196

Later, on the way down, I flushed a bird by the old granary down from the field who flew off toward Y. Then, while passing at Y, I heard a bird calling who turned out to be ♀280 (see Y notes).

I still wish I could get some better data on the nest up here.

19 October Watched here from 1230-1640, finally getting some feeding visits. Both babies appeared to be looking out of the hole (alternately); the time for fledging is definitely near. See compilation on back.

20 October Watched here again from 900-1200. Both babies are definitely here, but won't be for much longer.

0.00. watching
- 28.00. ♂86
. 34.50. ♀ [=♀260] (acorns-3)
. 38.00. ♀
. 40.10. ♀
. 50.40. ♀ (acorns-3)
. 52.30. ♀ ( " -3)
. 54.00. ♀ ( " -3)
. 55.30. ♀ ( " -3)
. 57.55. ♀ ( " )
. 7.30. ♀
. 8.55. ♀
9.00. ♂402 (acorns-3)
. 16.35. ♀
- 25.10. ♂86
28.45. ♂402 (~~insect~~ acorns -3)
. 31.45. ♀ (acorns-3)
. 34.55. ♀ (insects-2)
- 37.45. ♂86
. 38.00. ♀
38.10. ♂402
- 42.15. ♂86
42.50. ♂402
- 50.00. ♂86
. 51.05. ♀
52.20. ♂402
. 52.40. ♀
54.45. ♂402 (acorns-2)
56.15. ♂402
. 57.55. ♀
58.20. ♂402
- 1.35. ♂86 (insects-2)
. 1.50. ♀ (acorns-3)

[Here ♀ dipped in several times over a period of ~45 sec. apparently not able to feed the baby of her choice (?)]

- 8.10. ♂86
- 11.40. ♂86
12.30. ♂402 (insects-2)
- 13.05. ♂86
- 15.10. ♂86
. 15.20. ♀
- 18.35. ♂86 (insects-2)
19.30. ♂402 (insects-2)
- 22.00. ♂86 (acorns-2)
. 48.45. ♀260
48.50. ♂402 (insects)
49.35. ♂402 (acorns)
. 50.10. ♀
50.40. ♂402 (acorns)
. 51.55. ♀
. 52.35. ♀
53.05. ♂402
. 57.35. ♀
0.00. Me leaving

See back for remainder of compilation

[ N times acorns seen fed: 14

N times insects seen fed: 6
(most of the 'unknown' feeding visits are probably insects also!)

## 19 October 1230-1640 Nestwatch

0.00. watching
- 40.21. ♀ (=♀260) (1) [bolus sz]
+ 41.25. ♂86
✓ 45.25. ♂402
- 47.55. ♀
✓ 48.30. ♂402 (2)
✓ 51.45. ♂402 (2)
· 52.50. ♀
✓ 55.30. ♂402
· 55.50. ♀
· 56.40. ♀ (2)
+ 56.50. ♂86
· 58.30. ♀
· 59.45. ♀
✓ 9.00. ♂402
✓ 10.20. ♂402
· 10.50. ♀260
· 1400. ♀
✓ 14.20. ♂402
· 16.35. ♀
+ 22.20. ♂86
· 22.30. ♀
· 25.00. ♀
✓ 25.05. ♂402
· 28.15. ♀
+ 28.40. ♂86
· 29.00. ♀
✓ 33.50. ♂402
+ 34.20. ♂86
· 36.10. ♀
· 37.45. ♀ (2)
✓ 38.50. ♂402
· 44.25. ♀
✓ 46.00. ♂402 (acorns-2)
✓ 46.30. ♂402
· 47.15. ♀
✓ 47.40. ♂402
✓ 48.20. ♂402 (acorns-3)
✓ 55.25. ♂402 (2)
· 55.35. ♀
· 57.20. ♀
· 2.00. ♀
+ 10.15. ♂86
· 10.40. ♀ (acorns-3)
✓ 12.30. ♂402
✓ 14.55. ♂402 (acorns-3)
000
· 8.50. ♀ (acorns)
· 10.15. ♀
· 11.20. ♀ (acorns-2)
+ 11.50. ♂86 (acorns-2)
· 16.30. ♀ (acorns-2)
· 26.40. ♀
· 46.35. ♀
· 49.50. ♀
+ 50.20. ♂86
· 50.35. ♀
✓ 51.00. ♂402
+ 51.20. ♂86
· 51.50. ♀
✓ 52.20. ♂402
· 57.40. ♀
✓ 59.55. ♂402 (insects-2)
· 0.05. ♀260
10.00. Me leaving

Total time watched: 250 min.
#times acorns seen fed: 8
#times insects seen fed: 1

| | ♂86 | ♂402 | ♀260 | Total |
|---|---|---|---|---|
| #feedings | 9 | 20 | 33 | 62 |
| #fs removed | 0 | 0 | 0 | 0 |
| x̄ bolus sz (N) | 2 (1) | 2.3 (7) | 2 (6) | 2.1 (14) |

## 20 October 900-1200 Nestwatch

Total time watched: 180 min

| | ♂86 | ♂402 | ♂260 | Total |
|---|---|---|---|---|
| #feedings | 12 | 14 | 24 | 50 |
| #F.S. removed | 0 | 0 | 0 | 0 |
| x̄ bolus sz (N) | 2 (3) | 2.4 (5) | 2.9 (8) | 2.6 (16) |

## Melanerpes formicivorus

School Hill — Hastings Reservation

21 October 1710. Walked by the hole to see both babies still inside looking out. They did, however, appear as though they'd fledge if I did so much as give them a wry look.

22 October Watched the nest from 745-1015; see compilation on back. Both babies appeared to still be in the nest, but they are really stretching things and should surely fledge later today. 386 did not feed at all; most feedings were of acorn bits.

1700. Walked by the hole to see a baby still inside looking out at me. Maybe they're planning on spending the winter in the nesthole?

23 October 1700. At last nobody is in the hole as I wander by.

13 November 1725. Bird looking out of the nest hole; birds are clearly roosting here.

16 December 1600. Two birds flushed from the granary when I came to count stores: Tree 1: 260, Tree 2: 1632 } 1892

These birds have pretty well filled their granary. I also took a sample of 80 acorns and replaced them with specimens of my own.

Up at School Hill "B" there are no stored acorns and no sign of any inhabitants.

22 October 0745-1015 Nesting Watch

♀=♀260 A=fed acorns
♂=♂402 I=fed insects
(No feedings by ♂86 today)

0.00. Watching.
23.00. ♀ (A-3)
23.55. ♀ (A-2)
26.35. ♀ ( -3)
31.00. ♀ (A-2)
31.40. ♀
32.00. ♂
32.40. ♀ (A-3)
35.25. ♀ (A-2)
37.45. ♀
41.20. ♀
48.55. ♂ (A-3)
51.00. ♀
54.45. ♀
1.00. ♂
2.40. ♀
3.35. ♂
4.22. ♀ (A-3)
5.50. ♀ (A-3)
7.00. ♀ (A-3)
8.05. ♀ ( -2)
14.30. ♀
17.30. ♀
x 19.20. ♂, but did not feed
23.40. ♂ (A )
0.00.
4.00. ♀ (A-2)
5.05. ♀ (A-3)
6.10. ♀
8.40. ♂
13.00. ♂
16.55. ♀
17.40. ♂
30.55. ♀ (I-3)
31.20. ♀ (I-2)
Me leaving.

Total time watched: ~150 min
N times Acorns fed: 12
N times Insects fed: 2

| | ♂86 | ♂402 | ♀260 | Total |
|---|---|---|---|---|
| N feedings | 0 | 8 | 24 | 32 |
| $\bar{x}$ bolus sz | - | 3(1) | 2.6(14) | 2.6(15) |
| F.S. removed | - | 0 | 0 | 0 |

## Melanerpes formicivorus

School Hill West — Hastings Reservation

21 April 1030. A surprise! At least 2 birds here - ①♂ub and ②♂M/. Both in this area, hawking on the side up above Gate.

1045. The banded ♂ flew off and greeted a 3rd bird!

1100. Now ♂ub on the far (SW) side along with ③♀ub. Now that I think about this, I bet these are the Westgate birds - ♂ub, ♀ub, and ♂58. This makes at least as much sense as there being a whole new group up here, especially given that they have been almost entirely missing from their real territory lately. Also, both these birds finally disappeared by mosying down the hill more or less towards the Gate. I do wonder, however - might they be roosting up here? It might be worth checking.

1600. Returned here and fixed up the old roost hole in the Black Oak, where my cut section had fallen out.

15 May 1330. Nobody seen here in passing.

24 June 1750. A big surprise! I flushed a bird from the Black Oak upon arrival, prompting me to go up and check the hole that I've previously opened, only to find 3 still juicy but mostly decayed carcasses of AW babies whose crown feathers were already ~1/8" long and who were thus ~15 days old I'd guess (their primaries were just breaking their sheaths). The soft parts were mostly but not entirely gone, and I'd guess they'd been dead at least a week, possibly a little longer. Thus, they may have died during last week's cold spell (16-17 June) when many of the other nests here failed. In any case, I removed the remains, and am now left to wonder who is living here - the Westgate birds, as I

(Probably 13-14th day)

## Melanerpes formicivorus

School Hill West — Hastings Reservation

(24 June) suspected back on 21 April? (this would explain their lack of a nest elsewhere) or someone entirely new? Some watching is going to have to be done here.

25 June 815. On my way over here, I flushed 2 birds from a snag up from the granary right by the Chaparral/woodland "pass" (see Map on back).

825. Flushed a ♀ from the granary after seeing noone on the far side of the hill. ♀ flew back up towards the area where I flushed the 2 birds earlier; calls and even a few Geerricks from there.

830. Back on top, ①♂ ub. Several others hiding here.

850. There do seem to be several (3-4) birds here. I was watching a ♀ up by the Pass while some more calls came from down by the granary.

910. Searching around again, but everyone seems to have disappeared. Last I heard a bird he sounded way over toward the Gate side.

925. Now watching the granary.

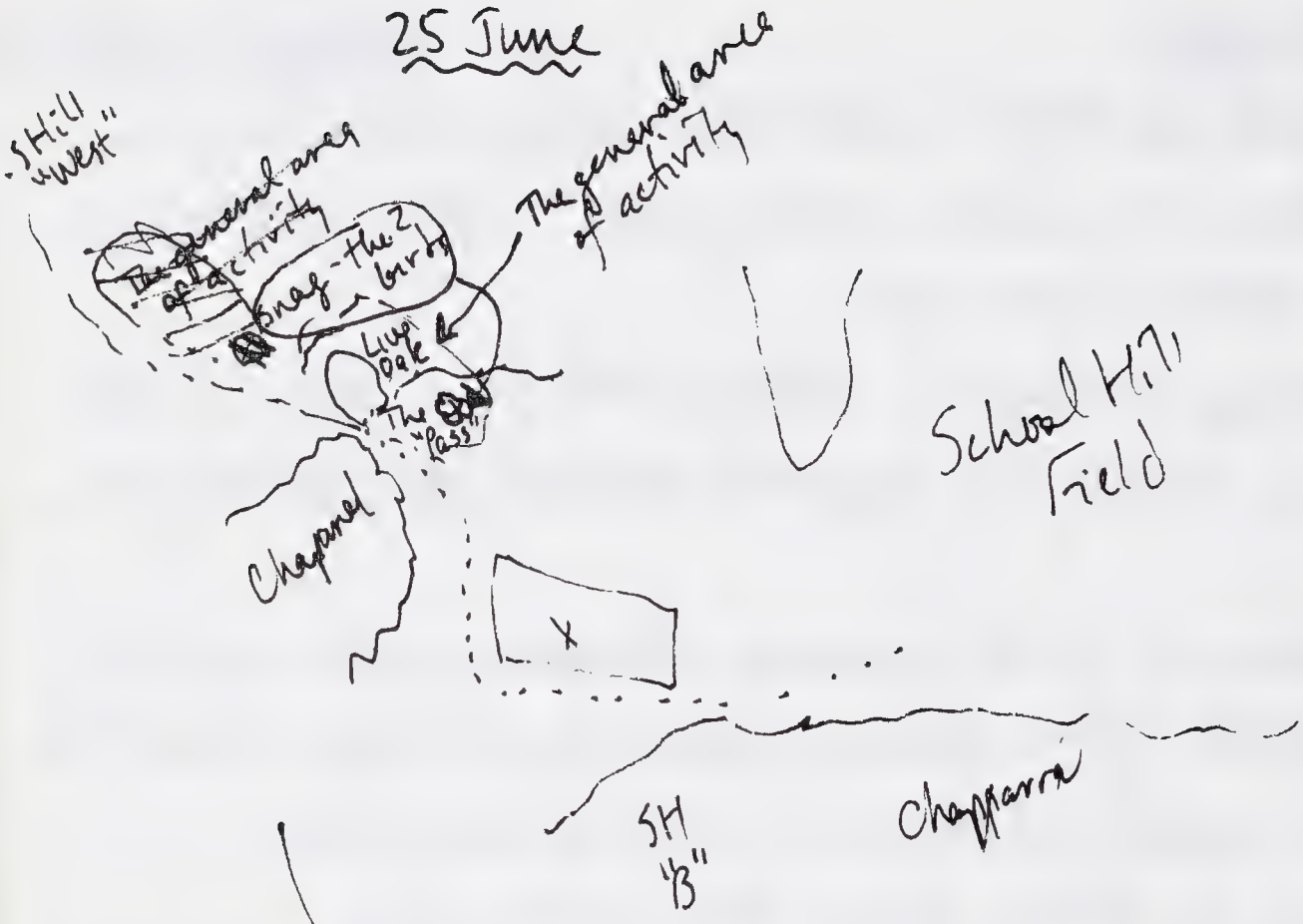
950. 22 birds back in the vicinity.

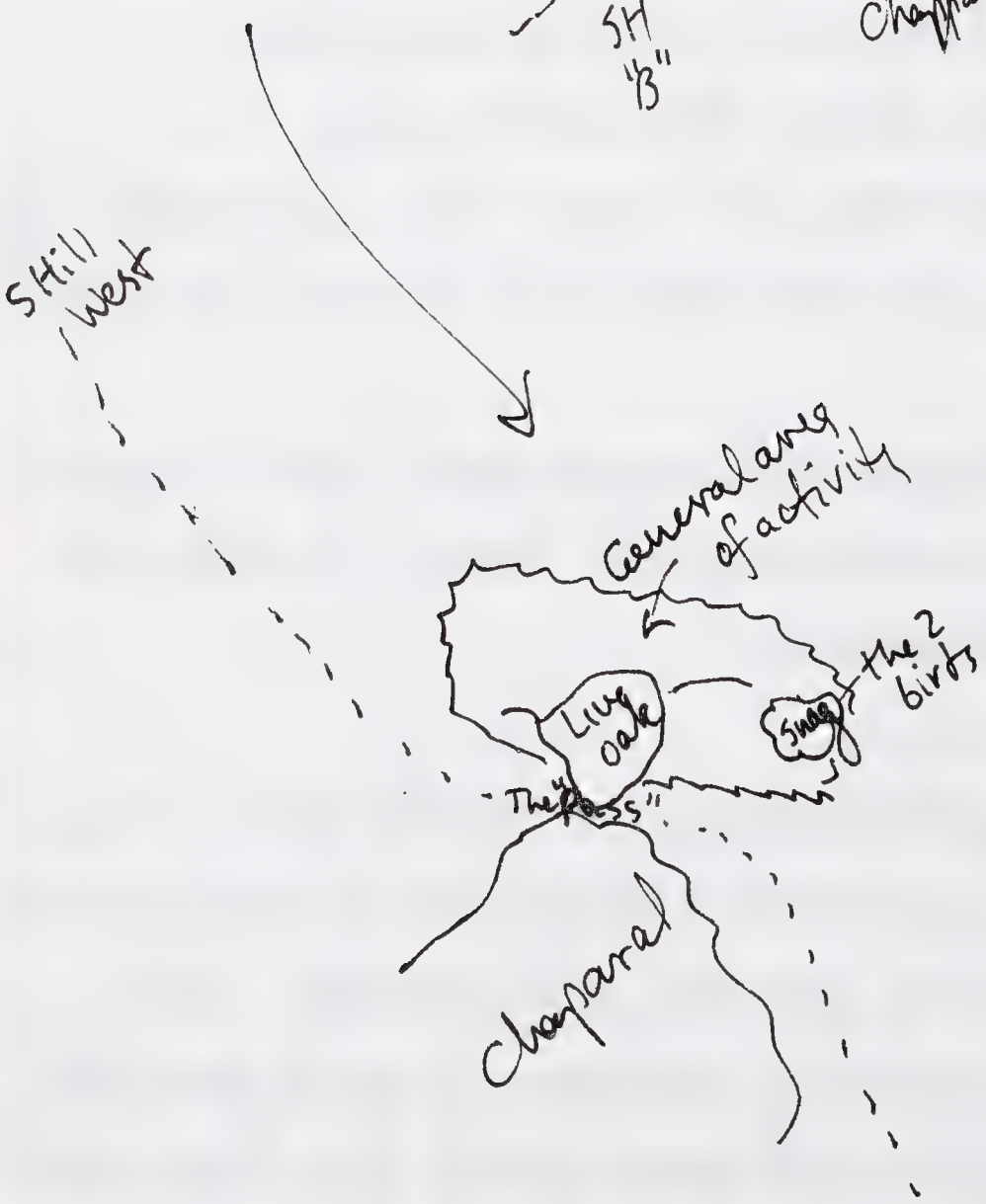
953. ♂ and ②♀ ub together in the corner by the road (SW side)

1000. Leaving. Nothing, of course, is certain, but it would appear as though there is a pair of birds here, both unbanded. Their relation to WGate is necessarily unknown - I would speculate that one or the other of them ~~se~~ ~~her~~ emigrated from there - but in any case the entire WGate group certainly did not move up here. Hopefully I will be able to figure out where these birds are roosting and catch them, eventually.

See also Ron's notes, who is presumably watching simultaneously at Gate this morning.

25 June


Still "west"
General area of activity
snag - the 2 birds
The general area of activity
Live Oak
The "Pass"
Chaparral
School Hill Field
X
SH "B"
Chaparral


Still
West
General area of activity
Live oak
snag
the 2 birds
The "Pass"
Chaparral

# Melanerpes formicivorus

School Hill West — Hastings Reservation

30 August — With an ambush set here, both birds came, but somehow sensed some difficulty and thus went off and roosted elsewhere in the same tree.

15 September — 835. No sign of anyone here in passing.

29 September — 1115. Two birds flushed from the granary as I approached, but no sign of stores yet or of a nest.

15 October — 1140. No sign of birds or stores (!) observed in passing. I take it back: I do see 1 stored acorn over here after all.

13 November — 1720. Bird roosting in the hole in the Black Oak; it may very well be ambush time again.

15 November — 600. Another successful ambush netted me the (presumably) 2 birds here, an adult ♂ and ♀, now ♂530 and ♀531. The granary here is also doing fairly well as far as stored acorns go; this group appears to be in fairly decent shape.

16 December — 1630. There are a fair number of stores here but the granary is nowhere full; I'd estimate <500, probably the 400-500 range. No sign of any birds in passing.

# Melanerpes formicivorus

Arf, too — Hastings Reservation

9 November 1730. After many years of wondering and wandering by this territory I have finally succeeded in finding their roost tree - a Blue Oak off to the north of ARF. Three birds roosted in it this evening, and it is definitely ripe for an ambush.

10 November 1330. Set up the ambush.

1722. Three birds roosted here again tonight. Should be dead meat.

11 November 630. The ambush went perfectly. The 3 birds were all unbanded, and are now #527, 528, and 529. ♂527 was definitely an adult; the other 2 (♂528, ♀529) have all the characteristics (including darkish eye, heavy tailspots, etc.) to be expected from first-year birds. If so, I have to wonder whether there are more birds here or if the group is really composed of 1 adult ♂, a 1st-yr ♂, and a 1st-yr ♀.

I also want to report the most amazing encounter while during the ambush proceedings. I was up (~15') in the tree trying to take the birds out of the net-bag; they were screaming as usual. Hearing a noise below, I looked down and saw something - a jackrabbit I thought (!) - running towards the tree. In a flash I felt a claw at my thigh, looked down, and - having in that brief instant already missed the beast's climb up and down the tree - saw a Bobcat bounding away off into the woods. Clearly he'd heard the screams and zoomed in expecting breakfast; I felt rather fortunate he didn't have me for his first course!

18 November In passing by here today I was fairly certain that the bird

## Melanerpes formicivorus

Arf, too — Hastings Reservation

(18 November) up in the top of the Valley Oak perch tree (a ♂?) was unbanded. Thus there are probably more birds here than the 3 I caught last week.

# Melanerpes formicivorus

## Black Oak — Hastings Reservation

3 January — Took a sample of 25 acorns from the granary, replacing them with my own.

6 February — Counted stores: 478. No sign of any birds here, however.

9 March — Still stores here, but no sign of any birds.

10 March — 1045. ♂ Yel/Lgt #102 in perch tree, flew over to Al area (!)

11 March — 1700. Once again, a bird up in the perch tree (probably ♂102) flew over to Al, then back. In addition, a 2nd bird was involved somehow, seen at the end preceding the ♂ back to the Black Oak area from Al.

23 March — 1 ♂ sitting in the sap tree which the birds here used last year (between the perch tree and the central storage area in a live oak) at about 1430.

9 April — 1015. Watching. Nobody immediately in evidence, but there are stores here.

1035. ♀ here briefly sapsucking, then took off.

1100. Now 2 ♂♂ and 1 ♀ here; ♂♂ sapsucking. Are not who I expected: ① ♂ Blk/Or / Blk/Or #426 and ② ♂ M/ - wh(u) #321. Hmmm. (both these birds had moved to Bianca, or so I thought).

1112. ♀ is hard: ③ ♀ Or-wh/M + Or-wh/Dk ... this would appear to be ♀320, not seen here since last spring, and deleted long ago. I still need a convincing look, however. Meanwhile, what's happed to the real Black Oak birds?

1120. Now 4 birds here - 3 in sap tree and one in perch tree. ④ ♂ Yel/Lt #102. Hmm. Sapsucking with other 2 ♂♂.

1130. Looks like about it. I'm moving to see what, if anything, is up at Bianca. I'll have to know more before I can figure out what to do here.

# Melanerpes formicivorus

Black Oak — Hastings Reservation

(19 April) Counted stores: 296.

24 April 1545. ♂ in a hole in the Valley Oak in the central area - could very well be the first nest of the year.

25 April 1030. Nobody in the hole where I saw a bird yesterday, but I went up anyway (not an easy feat by any means) and opened the hole (even harder), confirming that there is nothing in it as yet. The holes up on this limb are difficile.

1110. ♂ wn/red #102 and at least 2 others over on the other side of the forest (the Bianca side).

28 April 900. Watching. Noone in the local holes on arrival. Also noone in the sap tree right at the moment.

915. ① ♀ Red right/M Red-LP/Blk-LG #320 now here sapsucking. This bird is definitely here.

950. Several birds in the rear of the forest here. One appears to be ② ♀ Red/M #427. Also 2 ♂♂. My look at this ♀ was fleeting, but I think it was valid.

955. ♀320 back sapsucking.

1015. Birds are over by Bianca. ~~Leaving~~.

1018. Just as I ~~said~~ say that ③ ♂ Or-wn or #426 and ④ ♂ M/ #321 come in to sapsuck.

1030. ~~Leaving~~.

1031. Once again birds show up as I prepare to depart. This time I got another brief but convincing view at ♀ Red/M #427 and also a ♂ who I called as ⑤ ♂ LG-Blk/M, most likely ♂428 (with ♀427). Looks like most everyone is still here after all. Now (1035) I'm leaving for sure to check over at Bianca, however (which is the direction all these birds are going when they leave).

# Melanerpes formicivorus

Black Oak (total) Hastings Reservation

29 April 1845. At least 4 birds here roosting in the '78 nest hole and the hole I just opened the other day.

Add: ♂321, ♂426. Returned here ~30 March (see Bianca notes).

♀320. A definite problem. Last seen (prior to this month) for sure on 21 May 1978, but according to my notes I probably did see her again on 29 December 1978 and then again now on 19 April 1979. Thus the best I can assume is that this bird was probably here the whole time, and should be reinstated.

5 May 645. Noone in any holes here.

6 May 1330. With a ♂ looking out of the '78 (etc.) nest hole, I went up and discovered 2 eggs - the 1st of the season! One was "fresh" (clean) [marked #2] while the other was dirty already and had a small dent at one end [marked #1]. Both were marked and returned.

7 May 1330. Checked the nest - still 2 eggs (the same 2 as yesterday) They were slightly dirtier than yesterday, however, so at least something has been going on here.

9 May 1630. Checked the nest - only one egg and it's stone cold. Also noone in the nest. This nest is clearly abandoned.

12 May 745. Noone in/out of any holes in passing.

17 May 1110. Noone in any holes here or seen in passing.

24 May 1030. A ♀ in the same old hole prompted me to go up and check. They are at it again with 4 eggs this time!

25 May 900. Hole checked: the same 4 eggs, warm.

26 May Watched the nest this morning from 630-930. See compilation on back.

(go to p.5)

26 May 630-930. Nest watch (incubation)

0.00. ♀ looking out of hole
1.10. ♀ leaves
15.50. ♂426 enters hole.
30.00 (0.00)
6.15. ♂ looking out.
6.35. leaves
60.00 (0.00)
17.50. ♂102 enters hole.
34.35. looks out
38.00. leaves
0.00.
30.00. still noone in hole.
Me leaving

Total time Watched: 180 min.

| | ♀? | ♂102 | ♂426 | Total |
|---|---|---|---|---|
| Time incubating | 0 | 16.45 | 20.25 | 37.10 |
| Time looking out | 1.10 | 3.25 | .20 | 4.55 |
| Total in nest | 1.10 | 20.10 | 20.45 | 42.05 |
| # visits | 1 | 1 | 1 | 3 |

# Melanerpes formicivorus

## Black Oak Nest Record — Hastings Reservation

5 May 615 — No one in nest hole.

6 May 1330 — ♂ in hole; hole opened: 2 eggs.
① Dirty, small dent in one end
② Clean; fresh.
Eggs marked 1 and 2.

7 May 1330 — Still 2 eggs. Slightly dirtier than hier.
No one in nest

9 May 1630 — No one in nest. Only 1 egg (#2), stone cold. Nest abandoned.

24 May 1030 — ♀ in hole. Hole opened: 4 eggs, not particularly fresh:
① 21.7 × 17.0 (a runt?) } Did not hatch- Didn't appear to contain an embryo (see back)
② 26.5 × 20.8
③ 26.5 × 20.6
④ 25.7 × 20.1

25 May 900 — Still the same 4 eggs, warm.

29 May PM-30 May AM — Eggs hatched.

2 June 1600 — Hole opened: 2 babies + egg 1 (which did not hatch)

| | #497 ① DP-Or | #498 ② LB-Yel |
|---|---|---|
| 2 June 1600 | $21.8^{11.5}$ | $22.0^{11.5}$ |
| 9 June 1630 | Both ok. | |
| 12 June 730 | Both ok. | |
| 18 June 1800 | Both ok. | |
| 21 June 700 | $76.7^{81.5}$ (tail feathers definitely longer) | $78.5^{79.5}$ |

Egg ①

Mass of congealed rotting material
No obvious embryo.
No fluid (shell was rather battered in places - no doubt the interior was quite dessicated).

# Melanerpes formicivorus

Black Oak — Hastings Reservation

(26 May) Though the activity at the nest is subdued (to say the least), there was a fair amount of activity in the area, including rather animated greetings and even occasional Carricks. At the nest itself were seen only ♂102, ♂426, and a ♀.

29 May Watched the nest today from 720-1040. See compilation on back. Again only ♂102 and ♂426 were seen with no ♀ at all appearing!

30 May Watched here from 1600-1830 - see compilation on back. I saw 1 new ♂ today at the nest (♂321) and had a very brief look at what was probably "the" ♀, but she is apparently very shy and left without letting me identify her and without returning. In any case, the babies have hatched here and everyone was busy bringing food.

2 June Watched the nest today between 1430-1530 and 1600-1700. Things were slow - in fact, I failed to detect a single visit by anyone to the nest. This prompted me to check the nest in the middle of the watch, but there are 2 healthy babies here. Hopefully this pattern of parental neglect will break eventually.

1730. Counted stores: 115. Still some at least!

3 June Watched for a stretch here, once again seeing no feeding visits (♂102 was in the hole when I arrived, however). See the compilation, as it were, on the back.

5 June Watched the nest today from 700-945. There was rather more action today at last! See compilation on back.

7 June Watched here from 700-1000. See compilation on the

## 29 May 720-1040 Nestwatch (incubation)

♂?
- 20.00. ♂ in hole looking out
- 24.00. Back down.
- 31.30. Looking out.
- 32.00. Leaves.

♂102
- 47.55. ♂102 enters
- 0.00
- 0.25. ♂102 leaves (to chase intruder?)

♂102
- 17.40. ♂102 enters.
- 35.00. looks out
- 0.00
- 1.35. ♂ looks out.

41.30. Back down.
4.40. Leaves.

♂426
- 13.20. ♂426 enters.
- 20.40. looks out.

22.15. Leaves to chase away a Scrub Jay from Granary area.

♂426
- 24.35. ♂426 reenters.
- 29.50. Looks out.
- 36.00. " "
- 42.10. Leaves.

30.25. Back down.
38.00. " "

♂102
- 42.15. ♂102 enters. No real interaction between the 2 ♂♂ - just a very faint "wa-wa" by one of them.
- 49.05. Looks out.
- 2.20. " "
- 40.00. Still in hole. Me leaving

50.00. Back down.
3.40. " "

Total time watched: 200 min

| | ♂? | ♂102 | ♂426 | ♀ | Total |
|---|---|---|---|---|---|
| Time incubating | 7.30 | 105.25 | 22.20 | 0 | 135.15 |
| Time looking out | 4.30 | 11.50 | 4.10 | 0 | 20.30 |
| Total in hole. | 12.00 | 117.15 | 26.30 | 0 | 155.45 |
| #visits | 1 | 3 | 2 | 0 | 6 |

## 5 June 700-945 Nestwatch

- 0.00. ♂102 looking out of hole
- 18.00. Back down.
- 28.40. Leaves.
- 28.45. ♂426 enters ② (No vocalization)
- 28.55. Looking out.
- 31.35. Back down.
- 43.40. Looking out.
- 43.50. Leaves
- 59.45. ♂321 enters ③ (Caterpillar)
- 0.35. Leaving
- 0.40. ♂426 enters ③ (soft waka's - no chatters.)
- Fed, left right away.
- 36.50. ♂426 feeds ③ (Cicada)
- ? Don't know when this bird left.
- 35.45. ♂426 feeds ②
- 45.00. Still in hole. Me leaving.

| | ♂102 | ♂426 | ♂321 | Total |
|---|---|---|---|---|
| Time inside | 10.40 | (21.30)* | 0.50 | 33.00 |
| Time looking out | 18.00 | 2.50 | 0 | 20.50 |
| Total in nest | 28.40 | (24.20)* | 0.50 | 53.50 |
| #visits | 1 | 4 | 1 | 6 |
| x̄ bolus size (N) | - | 2.5(4) | 3(1) | 2.6(5) |

*Minimum. The length of one bout was missed entirely.

## 30 May 1600-1830 Nestwatch (hatching ♀)

✓
- 0.00. (♂102 in hole)
- 5.00. Looking out
- 9.55. Leaving.

✓
- 10.15. ♂426 entering (bolus of ②)
- 34.05. Leaves.

- 34.12. ♂321 enters ②
- 42.40. ♂426 lands ②
- 43.10. ♂321 leaves. Soft waka's to each other no chattering

✓
- 43.17. ♂426 enters
- 53.15 looks out
- 55.40. Back down.
- 0.15. looks out.
- 0.35. Leaves

- 4.40. ♂426 enters ③
- 10.45. Looks out
- 13.40. ♀ lands at hole? Leaves w/o entering
- 11.15. Back down.

✓
- 13.45. ♂ looks out
- 15.35. Back down.
- 27.25. looks out.
- 27.43. Leaves.

✓
- 31.05. ♂102 enters
- 52.45. leaves

✓
- 52.53. ♂426 enters ① no vocalizations
- 0.00.
- 4.10. leaves.

✓
- 4.15. ♂102 enters ①
- 19.35. Leaves.

✓
- 19.40. ♂426 enters ② Again no audible vocalizations.
- 24.20. Looks out
- 30.00. Me leaving

25.55. Back down.

Total time watched: 150 min

| | ♂102 | ♂426 | ♂321 | Total |
|---|---|---|---|---|
| Time down in hole | 42.00 | 78.50 | 8.58 | 129.48 |
| Time looking out | 4.55 | 6.58 | 0 | 11.53 |
| Total time in hole | 46.55 | 85.48 | 8.58 | 141.41 |
| #visits | 3 | 5 | 1 | 9 |
| Bolus size (x̄) | 1(1) | 2(4) | 2(1) | 1.8(6) |

## 3 June 1100-1230 Nestwatch

- 0.00. No one looking out.
- 28.00. ♂102 looking out.
- 29.25. Leaves.
- 60.00 (0.00).
- 30.00. Still nothing. Me leaving.

Total time watched: 90 min

| | ♂102 |
|---|---|
| Time down in hole | 28.00 |
| Looking out | 1.25 |
| Total in nest | 29.25 |
| #visits | 1 |

Time watched: 165 min

Melanerpes formicivorus

Black Oak Hastings Reservation

(7 June) back of this (p.6) page.

The ♀, by the way, continues to not be seen at all.

2000. Watched roosting here tonight. In essense nothing at all happened - when I arrived at 1930, ♂102 (by facial pattern) was in the hole looking out, and he never left. Nor did I ever hear any birds elsewhere. Thus, I suppose there may have been somebody else besides ♂102 in the hole, but he, at least, definitely roosted there.

♂102 roosted in nest

8 June Watched the nest here from 800 - 1030. Things looked even worse here than usual - only 1 feeding, and even that one was apparently not complete (the bird exited with some of the food he entered with). I have to wonder again about this nest. See the compilation, as it were, on the back.

1950. Tonight, as far as I could tell, noone was in the roost hole when I arrived nor did anyone enter it. Thus, I would no longer count on this nest being extant. Once again I didn't hear nor see any birds roosting anywhere else here, either.

9 June 1630. Went up to the hole just to confirm that the nest has failed, and lo and behold what greeted me but rampant begging sounds from (at least!) 2 babies! Once again these birds manage to astound me!

11 June Watched the nest from 1330 to 1530 and never saw a bird. The babies apparently continue (?) to subsist on aerial plankton, if at all.

1950. Things were quite dark by the time someone roosted in

## 7 June 700-1000 Nestwatch

0.00. Noone looking out of hole.
? 20.00. ♂102 looking out!
(I don't know when this bird came; but in order to "equalize" with ♂426 I will give this visit no time (prior to 20.00) → see 5 June watch.
23.45. Leaving.

34.50. ♂426 enters (3)
41.55. Looks out.
51.10. " "
47.45. Back down.
51.20. Leaves.

20.20. ♂426 enters (2) (Cicada)
Feeds and looks out right away
21.45. Goes down.
29.35. Leaves.

38.20. ♂321 enters (2)
Looks out right away
39.45. Goes down.

♂321
43.25. ♂426 comes (2)
43.30. ♂321 leaves,
43.33. ♂426 leaves,

0.00
42.00. ♂426 enters (2)
45.15. Leaves.
57.00. ♂426 enters
57.20. Leaves.
0.00. Me leaving

Total time watched: 180 min

| | ♂102* | ♂426 | ♂321 | Total |
|---|---|---|---|---|
| Time down in nest | (0) | 22.03 | 3.45 | 25.48 |
| Time looking out | 3.45 | 7.25 | 1.25 | 12.35 |
| Total time in nest | (3.45) | 29.28 | 5.10 | 38.23 |
| # visits | 1 | 5 | 1 | 7 |
| $\bar{x}$ bolus size (N) | - | 2.25(4) | 2(1) | ~~3~~ 2.2 (5) |

*Minimum. Length of 1st (and only) visit missed.

## 8 June 800-1030. Nestwatch

0.00. Noone
32.45. ♂426 enters (3); went it; left 33.10 with some of the food!
0.00.
0.00.
30.00. Me leaving

| | ♂426 |
|---|---|
| Time in nest | .25 |
| # visits | 1 |
| $\bar{x}$ bolus size | 3 (1) |

# Melanerpes formicivorus

Black Oak Hastings Reservation

(11 June) the hole tonight, but 1) someone did roost there, and 2) I think (90% sure) that it was ♂102.

12 June I attempted another watch here from 630-730, seeing no visits even though there were some birds in the area. At that point I checked the hole, but the babies are still miraculously alive and kicking. I then watched another 45 minutes to no avail. How they do it is beyond me. They must be fed sometime during the day here, but when?

1950. ♂102 definitely was the bird roosting in the nest tonight (I identified him by facial pattern in the light of my flashlight).

18 June 1800. Opened the nest to check up on the babies, both of whom are, amazingly enough, fine.

2000. Nobody roosted in the nest with the babies this evening.

20 June 2005. Nobody roosted in the nest hole with the babies again tonight.

21 June 700. Banded and bled the 2 babies, now #497 and 498. Both looked fine except for the left leg of j498, which bent rather oddly just above the foot (normal < > j498). He appeared to be able to grasp and (hang) hold onto things normally, however, so I would think he'll be fine. (If this is a bent or broken bone, I may have caused it when I removed his nest band. It was not seriously hampering him, however, and hopefully will have time to heal before he fledges).

29 July This territory not affected by the fire or cleanup at all.

## Melanerpes formicivorus

Black Oak — Hastings Reservation

2 August 830. Checked the nesthole, where sure enough were the remains - pretty well picked clean - of j498. This is now the 2nd baby banded this spring who didn't end up fledging after all. (see 3 Nov., below).

Several birds were heard in the vicinity. There were no stores in the granary as yet.

16 September 730. 3 birds up in the perch area inc. ①♂ or #321. One by one all 3 flew off toward Bianca, where I heard a fair amount of greeting.

There are at least 12 new stores in the granary here. The fall has finally begun.

15 October 1600. Flushed 2 birds here in passing and noted that the central storage area here is already almost full of stores already!

15 October 1730. Flushed one bird from here in passing.

16 October Purge: ♂428. Last seen 28 April; gone, it would appear, by the time I began watching the nest on 26 May →
Disappeared about 12 May ± 2 wks.

3 November Looking at the remains of j498, found 2 August, I noticed that the left tarsus is broken. Thus, the apparent defect I noted when banding this bird back on 21 June was real and may very well have been the cause of his demise.

8 November 1000. Watching. Nobody in the area.

1045. One bird in here somewhere, but noone's in sight. And I'm getting cold. Going to walk around and count stores.

Stores: Central area: 1471
Side area: 572
} 2043. These trees are loaded!

# Melanerpes formicivorus

Black Oak — Hastings Reservation

(8 November) The granaries here are about as full as I suspect they could get!

10 November Finally saw several of these birds (♀427, ♀320, ♂321, and juv ♂497 for sure; possibly ♂426 as well), over on the knoll by Bianca-LAZ. See Bianca notes for details.

28 December 1200. Counted stores: Main area: 2135 } 2699.
Side area: 564 }

The granaries are really stuffed full here. I noted essentially no Black Oak acorns at all when I climbed around to get a sample of stores (I got ~85). (I did see 1, but that was it). No sign of the birds while I was here.

# Melanerpes formicivorus

## Arnold 1 — Hastings Reservation

2 January — Took a sample of 25 acorns from the granary, replacing them with some of my own.

6 February — This group is out of stores already, though I did hear some wakas from down the hill (toward the N slope) suggesting that there may still be a group here. I also stuck in a few acorns of my own in hopes of keeping the group from dissolving entirely.

9 March — Nothing seen around here in passing - no sign of life.

10 March — 1115. A call here led me to watch for 20 min. or so in the hopes of seeing somebody, but noone appeared.

1118. Aha - across the road in the Valley Oak: ♂ Yel-Red/Y-R ?. Don't know who that could be offhand.

1127. A ♀ was here, then went across the road and off to some meeting place back there.

1135. Fog coming in; I'm leaving. Somebody apparently still here, at least.

1150 Found the ♂ across the road - is definitely ♂ (Bss-LP) Yel-Da/Yel-Da #? This bird will have to be found again.

11 March — 1515. Watching. I need to find out who that ♂ is.

1600. Couldn't find anyone anywhere here. Have to try again.

1700. See Black Oak notes for shenanigens here. After this episode I discovered at least 2 and very possibly 3 birds were sitting in the granary here: the only one I saw well was an unbanded ♀; a 2nd bird was a ♂. Once again, there is more work in store, but it would appear as though a complete turnover (=abandonment followed by recolonization) has taken plaie here.

# Melanerpes formicivorus

Arnold 1 — Hastings Reservation

23 March 1250. Watching.

1330. Nothing. Going to walk around.

24 March 1615. Watching. 1645. Slow (but I did get a Starling here).

14 April 1000. Two birds, a ♂ and ♀, over in the forest towards Big Tree but on this side. Also some activity around here - birds waka-ing and the like. The ♂ flew to the Valley Oak just up from the granary but then I lost him. Watching.

1013. Two, possibly 3 birds here. ♂ is once again ♂Yel-DG/Yel-DG, appearing more and more to be ♂100.

1030. When flushed, these birds (apparently) flew all the way up to Keep Out and then back around via Big Tree (see map on back).

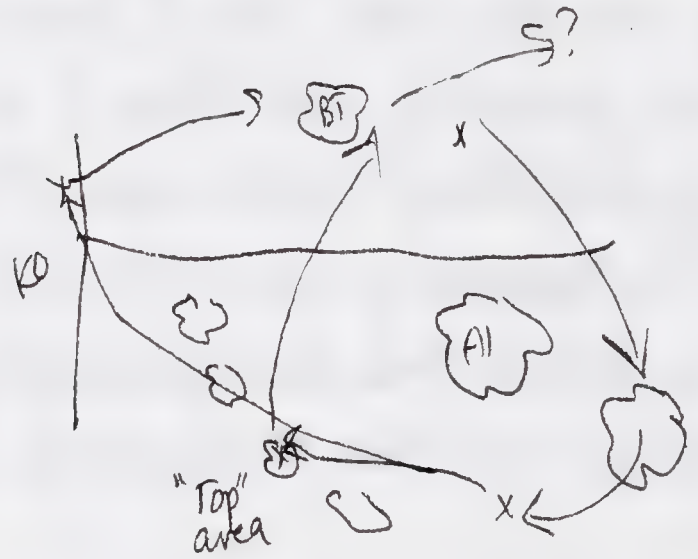
20 April Purge: ♂199, ♂267, ♀422, ♀447. First was last seen 29 December, all were seen 7 December, out of stores between 2 Jan and 6 Feb; Definitely gone (and replaced by 2 new birds) by 10 March → Abandoned about (not seen again) 31 Jan. 1979 ± 1 month.

Add: ♀ub and (apparently!) ♂100, ~~moved~~ founded here (age unknown and adult, respectively) about 1 March 1979 (~ ± 2 wks).

21 April 1830. Came up here to watch roosting, fully expecting the birds to roost in the regular hole here. However, upon examining it, a Starling flushed out of it! This was too much, and I later hung around long enough to blast the ♀ as she was returning to incubate her eggs (!) I found no sign of where the Acorners might be roosting, but at least they'll be able to use the hole in the granary again if they want to.

14 April

Movements of the Albatross



## Melanerpes formicivorus

Arnold 1 — Hastings Reservation

22 April 915. Well, flushing the mate from the Starling nest, I went up to the hole in the VO granary here and cleared the hole up. Uncovered were: 4 eggs, which were unceremoniously dumped, a pile of straw used as a nest, which was also cleared, and, → the remains, more or less mummified, of ♀422, bands and all. She was intact, though pretty well gone, and apparently died in her "sleep" while roosting sometime back. Thus, I can change her fate, at least, from "Abandoned about" to "Died about."

The amazing amount of straw and miscellaneous garbage stuffed into this hole by the Starlings clearly would have rendered the hole quite useless to AW, possibly permanently.

1120. ♀ flushed from the big VO below the granary. ♂ ♀ ub.

25 April 915. 2 birds, a ♂ and a ♀, in the tree at the top of Arnold field between A1, B0, Bianca, and LA2 (near the A1 '75 nest tree).

28 April Ron watched here this morning and saw both birds.

1240. Both birds on or in nest hole in granary!

29 April 1910. Bird(s) roosting in the '78 nest hole. Hurah! It didn't take them long to reclaim this hole once I shagged out the Starlings.

5 May Both birds roosted in the hole at Big Tree where I ambushed last fall (in the VO near A1, not Big Tree itself) the last 2 nights. Today I ambushed, but things mucked up and I didn't get my birds.

9 May 1600. Flushed 2 birds from the Big Tree area; both flew to the fenceline area up at Keep Out (toward the forest).

# Melanerpes formicivorus

Arnold 1 — Hastings Reservation

(9 May) One I got a look at while he was eating catkins and was ♂ Yel-Dk/Yel-Dk #100.

17 May 930. Both ♂♀ Yel-Blk/Yel-Blk #100 and ♀ Yel-Blk up just past Big Tree foraging on catkins. I watched them for a minute before they flew over to one of the trees along the fenceline (actually part of Keep Out).

24 May After Larry reported birds looking out of the hole in the granary here the last couple times he'd been up here (20, 21 May) I finally made it up here to check. And yes, they do have a nest. They have at least 3 eggs (probably only 3 eggs), but I couldn't be positive without gauging out half my wrist to make it to the bottom of the hole.

25 May 900. This time I sawed up the lining enough to reach the bottom, but to no avail: the nest has failed and there were no eggs or remains inside. Nearby were birds, however, including an unbanded ♀ who is probably the one who belongs here.

29 May 1045. No baby seen here in passing.

2 June 1700. Bird flushed out of nest hole!

3 June 1050. Noone in the hole this time.

7 June 1030. ♀ in hole. Going up, there are 4 fresh eggs in the nest! They're trying again!

10 June 1400. Flushed a bird from the nest hole as I went up to check the nest, which still contains 4 eggs.

11 June 1610. Bird in nest hole.

12 June 940. " " " "

17 June 1730. " " " "

(go to p.6)

# Melanerpes formicivorus

## Arnold 1 Nest Record — Hastings Reservation

20 May — Bird in hole. (Note that a starling nest had been cleared out of this hole back in April)

24 May 800 — Hole opened: 3+ eggs. (see notes)

25 May 900 — Hole opened: No eggs or remains.

2 June 1700 — Bird in hole.

7 June 1030 — Bird in hole Hole opened, 4 eggs, translucent and clean:

① 26.8 × 19.8

② 26.1 × 20.3

③ 27.3 × 19.4

④ 26.5 × 19.7

10 June 1400 — Checked hole: still 4 eggs.

19 June 1100 — Hole empty; no sign of eggs or babies.

# Melanerpes formicivorus

## Arnold 1 — Hastings Reservation

19 June 1100. With noone in the hole, I went up to check and discovered yet another empty, failed nest with no sign of eggs or babies. Since there was a bird in the hole back on the 17th, the nest presumably hatched and failed between then and now.

20 June 1930. Bird in the nest hole - presumably roosting here.

24 June 1600. Noone in hole here in passing.

25 June 1915. Both birds roosting (?) in the nest hole in the granary.

30 June Both birds flushed at 1900 from the hole in the granary; with the ambush set, however, they roosted elsewhere.

1 July 1920. Both birds flushed from the hole up at Big Tree.

6 July 530. At long last I finally pulled a successful ambush up at the Big Tree hole, nabbing the unbanded ♀, now ♀505. I don't know where the ♂ roosted; it was neither here nor in the nest hole.

29 July Most of the territory of this group was burned in yesterday's fire and a few of the large trees used by this group were killed. Their granary, however, was not hurt. The roost hole over at Big Tree that they've used in the past is alright also. They should be in good shape.

2 August Birds seen flying in this direction while walking around the Arnold.

4 August 920. 1 bird in the granary; flushed when I approached.

7 August 1045. Up in the foresty area above the granary and back toward A3 were ①♀ WH/LP #505, plus (independently) an unbanded ♀. No apparent sign of the ♂.

26 August 1140. ♀505 seen in the '75 nest area.

16 September 810. Some rather insistent calling here, but it stopped when I actually arrived. No stores here as yet.

## Melanerpes formicivorus

Arnold 1 Hastings Reservation

(16 September) 817. ♂7 WH/LP " " #505 just flew into the granary.
820. A 2nd bird here also; ♀505 rather upset about him/her. Several other birds over on the "top" area, peripheral to here.
825. 2 birds (not A1) in the old granary next to the road just down from here.
955 Still some activity over here.

5 October 1615. Flushed 2 birds from the granary (inc. 1 from the nest hole), which has some stores in it.

15 October 1740. A fair number of stores here by now.

8 November 1215. Watching. Bird (s) here, in the vicinity.
1300. Another failure. Leaving.
Counted stores: 1350. Doing alright for themselves.

10 November 1310. ♂ Yel-DG/Yel-DG #100 over in the Valley Oak up above the granary.

29 November 1300. Counted stores: 2329. Getting up there! I also took a sample of 75 acorns, replacing them with some of my own.

# Melanerpes formicivorus

Big Tree — Hastings Reservation

6 February — No sign of anybody here in passing.

9 March — " " " " " " "

11 March — 1600. Walked by here and saw a small rat (or Peromyscus?) run out of the roost hole where I ambushed last fall and into the other hole nearby; a second one (at least) was still in the 1st hole. Were either young rats or mice. I ought to trap them and find out. Looks like they've taken over both good-looking cavities here.

4 May — The A1 birds roosting here - see A1 notes.

29 July — Big Tree itself, or what was left of it, burned in yesterday's fire and was eventually sawed down by the CDF people. This territory - especially the forest back behind Big Tree, was as chewed up as anyplace by the fire and bulldozers. All in all, I predict that ~~this~~ this territory is not going to be used again for some time (not much of a prediction - there is no longer anyplace to put acorns here). Big Tree, which, of course, began to fall on hard times several years ago and a this spring, with nobody at all living here, was barely a ghost of its former self, is officially defunkt.

# Melanerpes formicivorus

Keep Out — Hastings Reservation

6 February — No sign of any birds or stores here.
9 March — " " " " " " " "
15 April — Flushed a bird out of the sap tree by the fence, possibly one of the new Al birds. No other indication of rebirth here.
22 April — 910. Flushed an unbanded ♀ from here.
29 April — 1900. Nobody seen roosting in the nest hole here on this foggy evening.
26 July — 950 Nobody here in passing.
29 July — The other nest hole in the Live Oak here (used in 1975(?) and 1978) burned in the fire. About ½ to ⅔rds of this territory burned or was chewed up by bulldozers; however the granary here escaped damage, only, apparently, because it was right at the start of the fire.
2 August — Somebody is back behind the old nest tree up on the knoll calling. (wakas).
16 September — 845. No sign of anyone or any stores here.
5 October — 1550. " " " " " " " "
15 October — 1700. " " " " " " " "
10 November — 1250. " " " " " " " "
23 November — 1300. There are 8 stored acorns here, but little evidence that anyone is very interested in them.

# Melanerpes formicivorus

Lambert — Hastings Reservation

6 February — No sign of anything here.
23 March — " " " " " "
14 April — 1030. Calls, birds up here! Possibly a group recolonizing at last.

1045. Watching. Quiet right now.

1050. At least 2 birds here - now both in "nest" tree. ①♂ u6 hawking.

1052. ♂ is $\overset{/M}{\text{LP-WH/BLK-LG}}$ #120 - from A3 (and seen there a little over an hour ago). Hmm.

1125. The ♂ (♂120) is sitting at the opened hole in the upper Valley Oak!

1130. Leaving. I don't know what's up, but I better keep an eye out over here.

19 April — Nobody here in passing.

21 April — 1855. Nobody seen in any roost holes here.

22 April — 1000. Flushed a bird from this area (possibly the same ub ♀ seen at Keep Out about an hour ago). Watching.

1015. 2 birds here! At least one a ♀.

1018. ①♂ u6.

1030. Bird here flew down toward Keep Out. Leaving. There may really be a group here, though I have to wonder about who the 2nd bird (presumably the ♂) is - ♂120 makes no sense at all. I must continue to check up here.

1040. Part of the problem may be resolved: 2 birds here now, ♀ and ♂ $\overset{\text{BLK?-?Or/M}}{-}$, conceivably but most likely not ♂120. Possibly ♂114? Don't know. I didn't really see him well enough to exclude ♂120. Hmm.

3284??

## Melanerpes formicivorus

Lambert — Hastings Reservation

25 April 920. A bird hawking from the "middle" tree, the big old I/O along the road up between Keep Out and Lambert.

28 April 1155. 2, possibly 3 (1 getting chased) birds here. Some Garricks.

1200. Now 4 birds; chases. At least 1 unbanded bird; also a banded bird. ① ♀ Or/M or/Blk #283; ② ♂ub.

1203. ♂ drumming. ♂ banded (♂ M/Or or/Blk Or?) getting chased.

1210. Now no longer clear who's chasée and chaser between the ♂♂. ♂ is #284! These are the 2 siblings back from last fall!

1215. ♂ub I think is doing more chasing than vice-versa.

1220. Seems like ~~both~~ either ♂ is scared of the other; neither is quite sure of itself.

1223. Now ub ♂ chasing ♂284 back and forth. ♀283 pretty passive through all this. A few more Garricks; some, at least, being given by ♂284. Also, now he's doing some chasing.

1230. Well - quite interesting. Two returnées, and several questions - will the 2 sibs inbreed? (I think not - it's close but ♂ub seems to have the upper hand) Will ♂284 stay anyway, even if ♂ub takes over? Quite exciting.

1231. All 3 next to each other (♀ in between ♂♂) eating catkins, but the ♂♂ are not at all happy with each other.

1235. ♂ub definitely ahead - ♂284 doing most of the Garricking and getting chased; ♂ub with ♀ more often. These are clearly the only main participants here.

29 April 1900. Nobody roosting here, as best as I could tell, on this cool, fogged-in evening. No sign seen from any of the standard holes.

## Melanerpes formicivorus

Lambert — Hastings Reservation

(29 April) Even though noone appears to be roosting here as yet (and thus the status of this group is uncertain) I will assume slightly prematurely that this group does exist:

Add: ♀283, ♂284. Not here 14 April; latter possibly here 22 April; both here 28 April (though the status of ♂284 at that time was certainly questionable)

→ Returned here 23 April 1979.

♂unbanded. Same as ♀283 above; a rival of ♂284 at the moment but somewhat ahead, it would appear

→ Moved to [age unknown] here ~~[illegible]~~ 23 April.

3 May 1840. Nobody in any holes here, despite it being nearly dusk and totally fogged in (visibility ~100ft.)

4 May 1900. Heard some noises over here suggesting that there may have been somebody roosting here.

5 May 545. Noone over here. 600. Still nothing.

6 May 1130. Watching. No action here at the moment.

1215. Nothing. No sign of anybody here (except for one brief wake downhill). Not at all clear that anybody is sticking around here. Those birds here last week may simply have come back temporarily.

7 May 1350. No sign of anyone in passing.

12 May ~~1000~~ 900. Now watching - we did note some activity up here earlier while elsewhere on the Arnold. ~~Recently add~~ ♂ banded (Re&Im??). ♀ banded also, I believe.

902. 3 birds here - someone got chased. We may back to where we were 2 weeks ago.

910. Leaving. They may be back, but I'll have to check again.

## Melanerpes formicivorus

Lambert — Hastings Reservation

(12 May) 911. Poof! Several birds here, inc. ① ♀ ub. (!) ♂ banded. Rather confusing, really. ♀ ub was not chased (♂ did chasing right then). ♀ could, I suppose, be the old unbanded one from here.

14 May 700. Watching. All quiet.

715. ① ♀ ub waka'd as she landed atop the nest tree.

720. Several birds here somewhere.

725. There appear to be 2 ♀♀ here: ① above and ② ♀ M/or #289 from A3. They do not appear to be pleased with each other. Some Garricking here now.

745. A lot of Garricking (by one bird) now.

756. Third bird: ③ ♂ M #284(?).

815. Leaving. No further action here. But things have clearly changed, with a new ♀ here and the ♀ position, rather than the ♂ slot, now under contention.

17 May 945. Activity here! 3+ birds; ① ♀ ub seen on arrival. Two birds together. ① + ② ♂ M/DB-Or/Or #284. Third bird being chased. Lots of calling here.

955. ♂ 284 drumming; also leading the way to chase out the 3rd bird.

1002. ♀ just drummed while atop the old nest tree with the ♂.

1010. Leaving. Looks good for this group. It's interesting that it's the ♂ who ended up staying, however, when it was the ♀ who initially looked all set.

24 May 805. Watching. Nothing happening at the moment.

835. Finally 2 birds showed up. Both sitting quietly together. ① ♀ ub. Other a ♂.

850. Things still quiet. I didn't get a good look at the ♂, but

## Melanerpes formicivorus

Lambert — Hastings Reservation

(24 May) I suspect I can assume he's ♂284. This group is apparently intact and settled.

29 May 1045. Nobody here in passing; also noone in any of the holes.

2 June 1710. " " " " " " " " " " "

11 June 1600. " " " " " " " " " " "

3 July Changes:

♀283. Apparently never really moved back in here, as she was here only briefly; Seen only here on 28 April

♂284. Apparently did move in, as per 29 April changes.

♂unbanded. Delete entirely. ♂284 won out afterall (see 28-29 April notes).

♀unbanded. Add. Not here on 29 April, first seen 12 May ⇒ Moved here ~ 5 May:

5 July 1630. Noone seen here in passing.

7 July 1930. Noone in any holes here; no sign of any Grits here in passing.

26 July 1000. Watching.

1015. A bird in the "Middle" tree down towards KeepOut slightly.

1100. No sign of anyone (else) up this way. Leaving.

29 July This territory not affected by the fire, which didn't make it up this far.

16 September 850. Several birds up here (!) in this general area. Watching.

852. ②♂♀ ub in old nest tree. 2nd bird here also.

920. Still 2 birds here. One just harvested an acorn.

925. ②♂? M/DB-Red #284 (!). The 'old' birds may be returning yet!

940. Leaving. Looks hopeful for this group once again.

## Melanerpes formicivorus

Lambert — Hastings Reservation

(16 September) There appear to be no stores put away here yet, but this area is well supplied with acorns. The group should be in good shape from here on.

5 October 1555. Nobody seen in passing here, and only 1 stored acorn noted any where in the granaries.

15 October 1700. Still no sign of any life here; it would seem as though the recolonization of this territory was brief indeed.

16 October After looking as though a renaissance was taking place here, the group appears now to have relapsed into oblivion. Since the "recolonization" was so brief, I will consider that the area has been effectively empty since last spring:

3284, 7633 (unbanded): Abandoned about (seen again): 31 May I 1 week.

This will change if in fact the birds are still here, which they certainly ought to be.

10 November 1245. Checking here, I didn't see anyone but discovered that there are lots of stored acorns here! Thus, the territory is resurrected after all!

Some of the trees here are in fact dripping with acorns; whoever is here should have little trouble packing their granaries with stores.

11 November 1240. Watching from hide.

1330. Zilch. Counting stores: LamFT: 142
"Nest" Tree: 99
HastFT: 385
HastVD: 121
} 747. Not bad, but still many holes unused.

# Melanerpes formicivorus

Lambert — Hastings Reservation

12 November 1210. Watching.

1240. Zilch. Going to walk around.

23 November 1130. Watching from hide.

1145. A ①♀ sitting in the middle tree down from the corner appears, as best I can tell, to be unbanded.

1230. No further sign of activity up here. Leaving.

1310. Hearing some calls up above Keep Out, I walked up and found ①♀ub and ②♂ or DG-or #284; the latter for sure and the former probably the same birds here previously. I think I can safely assume that they are the group here. (see map on back)

28 December 1400. The storage areas on the HNHR side are pretty well full.

29 December 1200. Counted stores:

| | |
|---|---|
| LamFT: | 356 |
| Nest tree: | 204 |
| VO Hast: | 294 |
| Hast F tree: | 1163 |

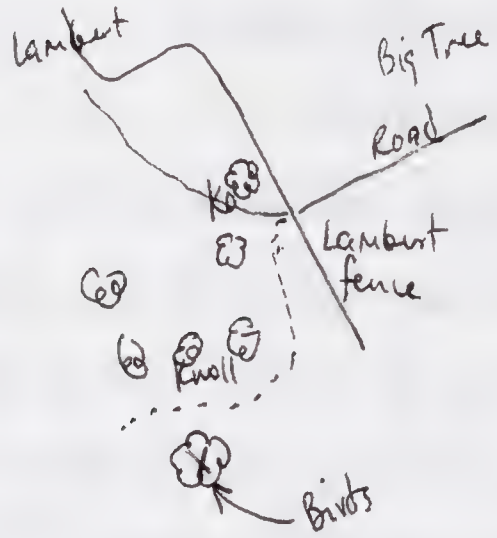
2017

Also took a sample of 75 acorns, replacing them with my own.

No obvious sign of any birds while I was up here.

23 November 1310

Location of Fub and 8284




This is ~60m up from KO's old nest tree and quite a ways from Lambert proper. There are no known territories here, however (except KeepOut).

# Melanerpes formicivorus

Arnold 3 Hastings Reservation

3 January Acquired a sample of 50 acorns from the granary here, replacing them with some of my own.

6 February 1000. Watching from hide.

1105. Over on the side by Lambert's: ♀ Maure/LP-Red #207.

② ♀ DB-Wh(n)/DB #290; apparently sapsucking over there.

1200. Over sapsucking now: ③ ♂ AL/Lght/ #204. Noone in the granary yet.

1230. Giving up. No big action around here, but there are a few birds.

Counted stores: N fork: 390, M fork: 222, S fork: 634 } 1246.

18 February Several birds were here sapsucking this afternoon.

9 March 930. Watching.

942. An apparent intruder was chased out by 1 bird right away.

945. The bird who chased the intruder was ① ♀ Maure/LP-/LP- # 207; she's now in the sap tree sapsucking.

1000. ② ♀ DB-Wh(n)/DB #290 now sapsucking with a 2nd ♀.

1030. ♀207 still around. An incredible amount of Scrub Jay activity is taking place.

1045. Now sapsucking: ③ ♂ DB/Wh-/DB/Wh-? # 123 (presumably).

1115. Leaving. Looks bad for ♀289; ♂120 clearly could still be here, however, given how difficult he usually is to find.

There are still quite a few stores here, though they do look rather depleted from last time.

1137. ♀290 flushed from LA2 area.

13 March Purge: ♀289. Last seen 8 Dec. 78, gone by 6 Feb. 1979, → Disappeared about 7 Jan. 1979 ± 1 month.

23 March 1230. 3 birds in the sap tree in passing. One flushed out all the way down to LA2.

# Melanerpes formicivorus

## Arnold 3 — Hastings Reservation

23 March 1215. 3 birds up in the sap tree.

14 April 710. Watching.

725. In sap tree sitting: ① ♂ LP-Wh/M #120. Disappeared right away, however.

737. ② ♀ Yel-DB/Or #289 (previously thought to have gone extinct).

747. Preening in '77 nest tree: ③ ♀ LghtY/LP-Mauve/LP-Red #207.

755. ♀207 went over to sap tree and is sapsucking.

825. Birds are also sapsucking in a tree directly behind the Gig Live Oak over by UA2. Right now, ♀207 and ♀289 are over here sapsucking.

843. ④ ♂ DB/LghtY DB/M #123 now sapsucking. Now ♂120 over here again.

930. Leaving. Birds continue to filter over slowly and sapsuck in the tree here. No sign of ♂204 or ♀290; the former, at least, is probably gone. Also no sign of a nest. The entire watch no one landed in the granary, but some stores do remain: 5 fork: 260 (none elsewhere).

1050. ♂120 over at Lambert with an unbanded ♀. See Lambert notes.

20 April Purge: ♂204. Last seen 6 Feb. 1979, gone by 9 March → Disappeared about 21 Feb. 1979 ± 2 wks.

24 April 1415. ♀ M/Or #289 plus a ♂ in sap tree.

1423. ♂ is ① ♂ LP/M LP-Wh/Dk #120.

1430. ♂120 joined by ③ ♀ Mauve/ #207. All still sapsucking. Leaving. Appears to be nothing exciting happening.

25 April 830. Several birds flushed from granary area to sap area: ① ♀207, ② ♂120, Sub intruder, chased by ♀207, also a 2nd ♂, also possibly an intruder as ♂120 seemed disturbed by him (but

## Melanerpes formicivorus

Arnold 3 — Hastings Reservation

(25 April) didn't actually chase him).

In any case, noone in any holes here (or at LA2).

* 838. More chases: ♂[126] wh/M ? (left leg seen well) and

* ♀[383?] Yel-Blk/M [?397?]. Both of these are intruders.

840. ♀207 doing a lot of the chasing. She and ♂LP.wh/Blk-La #120 in '77 nest tree now; intruders temporarily routed.

could also have been ♀397 from Westgate

I bet the ♀ intruder above is ♀383, from R3 (or formerly of R3). The ♂ would appear to be old ♂126, formerly of this group but not seen for quite some time.

* 850. 2 ♂♂ over on knoll by Lambert's: ♂ wh/DB-wh #126 and ③ ♂ DB/wh DB3/M #123. Sitting a few feet from each other.

856. ♂126 sitting off on his own; being tolerated by ♂123 at least but not, perhaps, a full-fledged group member.

900. Leaving. No more chasing here for the moment; ♂126 still here, however.

28 April 1115. While on my way up to here from LA2, 2 birds flew from the direction of the '76 nest hole toward me; one went all the way to LA2, the other landed by UA2 and

* was ① ♂ M/wh #126 again.

1125. Over at A3 itself are ② ♂ LP-wh/ #120, 2nd ♂, and 2 unbanded ♀♀ (one Carricking, Drumming). [Ron has also seen ♀207 here earlier].

1130 Over in sap tree: ♂120, ♂126. Don't see the ub ♀♀ now, but still some Carricks. No sign of either 2nd yr ♀♀.

1140. ♀207 and ♂120 still "tight" up in the sap tree. Is she going to stay and muck things up or leave like she should?

# Melanerpes formicivorus

## Arnold 3 — Hastings Reservation

29 April 1850. Noone seen in any of the holes here, but again bird(s) were roosting in the hole at UA2 which I suspect are these birds.

Add: ♂126. Seen here on 4 July 1978 after abandoning LA2 about mid-June. Not seen on 15 October, ~~or~~ 8 December, ~~or~~ 9 March, ~~but there~~ or 14 April, but here on 25 April. This is a long time to have missed this bird, but it isn't unprecedented. In any case, without any solid evidence to the contrary I think I simply have to reinstate this bird as having been here since he abandoned LA2 on 15 June 1978. This is somewhat unsatisfactory but is the simplest resolution to the entire dilemma.

5 May 600. Checked holes; no sign of anyone inside any.

7 May 1340. No one in any holes; 1 ♀ sapsucking; all quiet.

12 May 36123 and 126 at Blanca, acting as though they wish to try again.

14 May ♀289 up at Lambert. Otherwise, nobody seen at A3 itself in passing and all was quiet.

17 May 1015. No one in any holes here except for the '76 nest hole, where there were 5 Starling eggs and a nest. These were all summarily cleared out.

23 May 910. Nobody here, but there does appear to be some activity over by UA2.

Checking the granary, I found only 15 intact-appearing acorns. They are clearly just about out.

29 May 1055. Noone in any holes here or at UA2 (except for the Starling who has taken over the '76 nest hole again!)

# Melanerpes formicivorus

Arnold 3 Hastings Reservation

2 June 1710. ♂120 sitting, apparently by himself, in the sap tree. Noone in any of the known holes, however.

7 June 1115. Noone in any holes here. I went up to the '78 nest hole, however, and cleared out the 2nd Starling nest (they had had 4 eggs again already!).

11 June 1545. A bird in one of the holes in the Blue Oak over at UA2 (near A3) almost certainly was from this group and may portend a nest here!

1915. Bird in the hole again. It's a nest!

12 June 900. Noone in the hole this time, but I went up to check anyway and found 3 fresh (clean and translucent) eggs. Now all we have to do is watch here to find out who's here and what they're doing!

Larry watched the hole here at dusk and reported that noone roosted here this evening in the nest.

17 June 1730. Checked the hole (after flushing a bird out): still 3 eggs.

19 June 815. Watching the hole. Noone in it upon arrival.

[ 15.00. watching. Noone
60.00. still 0
20.00. Going to check the hole.

There were birds in the area, but noone came to the hole during this 80 minute watch.

930. Checked hole: empty.

25 June 1920. Bird in the '75 nest hole. Ron watching to see who's roosting where here.

30 June 1925. Bird in '75 nest hole again.

3 July Changes:

♂120. Here on 20 June; gone 22 June (see Ron's notes)

→ Disappeared about 21 June.

(go to p.7)

# Melanerpes formicivorus

Arnold 3 Nest Record

Hastings Reservation

11 June 1545 — Bird first seen in hole.

12 June 900 — Hole opened: 3 fresh eggs:

① 26.7 × 18.9

② 27.6 × 18.5

③ 26.0 × 18.0

17 June 1730 — Still 3 eggs

19 June 930 — Hole empty. No sign of nestlings or eggs.

## Melanerpes formicivorus

Arnold 3 — Hastings Reservation

(3 July) ♂unbanded. Replaced ♂120 on 21 June (see Ron's notes). ♂♂123, 126. seen here on 25 April; both at Bianca on 12 May, at which time they were fairly new into their new group → Moved to watched group ~30 April (note that the exact alliances of both these birds have frequently been in doubt; see 29 April notes.)

♀289. Last seen at A3 on 24 April; gone immediately thereafter (25, 28 April); seen at Lambert on 14 May → left group about 29 April.

♀290. Last seen here on 9 March; not here 14 April and beyond, but most likely seen intruding at Black Oak by Ron on 20 June → Left group about 27 March ± 2 wks.

7 July 615. 2 birds seen in the area while I was setting up an ambush at the '75 nest hole.

Also I want to note the decapitation of this Valley Oak, whose entire top has fallen since the last time I was up here to clear out the Starling nest.

8 July 600. In an unprecedented 3rd straight successful ambush in as many days I nabbed ♀207 and the new unbanded ♂ here in the '75 nest tree. The ♂ is now ♂508.

29 July This group took the most serious losses of all from yesterday's fire. Not only was most of their territory chewed up (down almost to South Ravine, at least) but their granary burned and was later felled by the CDF crews. This tree, a very long gone Valley Oak snag, was definitely past it's prime - in fact I'd admittedly been holding my breath during every windstorm of the last several years - but it was still

Melanerpes formicivorus

Arnold 3 — Hastings Reservation

(29 July) functional, ~~and~~ besides being one of the largest granaries on the Reservation, and will be greatly missed. Not only by me, of course, but also presumably by the 2 birds living here. Possibly they'll move over to CA2 and use the granary there. This wouldn't be too much of a change since they've been using that area for roosting, nesting, and foraging for many months now. In any case, the fact remains that Arnold 3 as an entity to itself, once one of the major groups on the Reservation, is now pretty much obliterated.

7 August 1030. Two birds who were up in the Top area of Arnold Field (the crest where LA2, UA2, & A1 meet) flushed to the edge of UA2, where I saw that at least one was banded (?wh/red? [♀207??]). They both then flushed over to A3, and I am willing to guess that they were probably the A3 birds.

26 August 900. Came up here with Ron and Nancy after Ron reported a Revolution activity at UA2 between the 2 A3 birds (defending the better granary) and several unbanded birds. See UA2 notes.

5 October 1545. Nothing noticed here in passing.

15 October 1705. One or 2 birds up in the trees over on the Lambert side of the fence; otherwise there are stores now at UA2 and I would guess that this group has "moved" over there, as expected.

# Melanerpes formicivorus

Upper Arnold 2 — Hastings Reservation

6 February — No birds here, but I suspect that the A3 birds may be using this area, at least for sapsucking.

14 April — A3 birds sapsuck between A3 and LA2, also possibly fly through here, but there is no sign of an autonomous group living here.

21 April — 1840. At least 1♂ roosting in the old nest hole here - presumably A3 birds but the situation deserves investigation.

22 April — 1130. Noone in any of the holes.

29 April — 1850. Bird(s) roosting in the hole here: a ♂ looking out. Still presumably A3 birds as far as I know.

14 May — 830. Nobody here in passing.

930. At least 2 birds in the area (note also Ron's report of "revolution" activity occurring in this general vicinity on 10 May). Both birds flushed towards LA2. Noone in the holes here, however.

2 June — 1715. Noone seen here in passing.

7 June — 1100. " " " " "

11 June — 1545. Bird in one of the holes of the Blue Oak by A3.

29 July — Most of the area here on the Arnold side of South Ravine was quite chewed up in the fire but the main granary and nest trees emerged pretty much unharmed. Thus this territory may perhaps provide a refuge for the 2 A3 fugitives.

2 August — Two birds were over here when I walked by and flushed down into South Ravine toward A3. - Possibly the A3 birds.

26 August — 900. Up here with Ron and Nancy after Ron reported Resolution activity here, apparently between the 2

# Melanerpes formicivorus

Upper Arnold 2 — Hastings Reservation

(26 August) A3 birds and several unbanded birds (the former defending the good tree, the latter holding out in the crummy one). By now things are fairly calm with only intermittant chasing and a moderate amount of greeting. The A3 birds had pretty much taken over the core, while numerous birds, including several unbanded and a few that were banded (① ♀ M Red/Light? ? ② ♂ M/DB-LP) were messing around in the periphery. Occasional Garricks Birds are picking green acorns.

950. 1 15' net up between the granaries - Pow - ♀ ub (now ♀520) caught.

1015. All pretty quiet at the moment. Ron going down to LA2 and Bianca.

1030. A3 ♀ (♀207) here again. Looks good for the 2 A3 birds taking over this territory, more or less as I expected.

1050. Still 2-4 unbanded birds fooling around the area. 2-3 birds over by A3. Mostly quiet, however.

1120. The A3 birds together at edge of LA2 with no further opposition of any consequence.

1130. Leaving. Still an occasional chase but all pretty slow.

16 September 1000. 2 birds in the isolated Blue Oaks over toward A1 flushed back across to here and were probably the LA2 (A3) birds.

5 October 1550. 2 birds flushed from here; 1, up near the top, was an unbanded ♀. There are some stores in the granary here.

15 October 1715. There are ~~some~~ stores accumulating here; it looks as though the A3 birds have indeed moved over.

10 November 1230. Checking around here I found a ♂ in the '79 nest hole.

## Melanerpes formicivorus

Upper Arnold 2 — Hastings Reservation

(10 November) Then He flushed off towards A3. Then I started counting stores and within 5 minutes noted a(nother?) ♂ looking out of a hole in the ~~[illegible]~~ 2° granary! He flushed off towards LA2. It's possible that this was the same bird, but unlikely. And so, it's possible that there are 2 ♂♂ living here. Needless to say, the area needs watching.

As far as stores go, the area is in good shape:

Main tree: 660
2° tree: 320
} 980.

11 November 1000. Watching. ① ♂ white/M #126 (good old ♂126!) sitting in top of tree near '79 nest.

1215. Leaving. A ♀ was hanging around here for some time, but I was never able to get a good look at her.

1220. In leaving, I pursued the ♀, who flew 1st to the top VO tree and then off towards the corner by Black Oak!

12 November 1130. Here as I approached are ① ♂ DB/M DB/LB-Red(!) #123 and ② ♀ - unbanded I think but I'm not positive. My suspicions are thus confirmed: ♂123 and 126 returned here from Bianca with/to join an unbanded ♀; the A3 birds did not move over here as I'd originally expected them to.

28 December 1315. Counted stores: Main tree: 884
2° tree: 472
} 1356

Doing very well for themselves! I took a sample of 50 stored acorns, but could only replace 11 of them (so remember to give them more later on!). 1430. Forty more acorns stuck back into the tree.

# Melanerpes formicivorus

## Lower Arnold 2 — Hastings Reservation

6 February — Nobody seen here in passing.

9 March — 1137. Flushed one bird in the perch tree, who turned out to be ♀DB-WN(n)/DB #290 from A3. She sat for a minute and then flew off up back towards A3.

24 April — 1600. A bird over here in the Blue Oak.

25 April — 810. 2 birds in the Blue Oak. Walked over and saw one as it flew around and eventually over to Al's '75 nest tree: ♀ub.

920. ♂ here eating catkins in VO perch tree, flew over to A3 and apparently greeted somebody there.

1125. ♂ hawking in Valley Oak perch tree. The bird is banded.

28 April — 1055. ♂ sitting in Blue Oak granary.

1100. Bird flew to UA2 and then beyond to/toward A3.

29 April — 1845. No sign of any roosting birds here on this foggy evening.

14 May — 830. Nobody here in passing.

850. 2 birds greeted each other here (possibly the new Bianca birds?).

17 May — 1030. Nobody here in passing.

24 May — 930. watching. 2 birds (+?) here. A ♂ carrying. ①♂ub. ♀ here also.

942. ♂ub is now back in the Blue Oak Drumming.

945. Both birds flew up to the Top tree - ♀ apparently unbanded also, unfortunately. ②♀ub.

955. Leaving. These birds may be seniors, however. (Are these the same birds seen here on 14 May?)

29 May — 1105. A bird sitting atop the Blue Oak here.

2 June — 1720. Noone seen here in passing.

7 June — 1015. " " " " "

## Melanerpes formicivorus

Lower Arnold 2 — Hastings Reservation

11 June 1540. Noone seen here in passing.

18 June 950. " " " " "

24 June 1600. Flushed a bird from the hole in the Blue Oak (!?) - prompting me to open the hole and check it. There was nothing inside, however, so we went ahead and set an ambush at the rear hole, where Ron saw at least 2 birds roost last night.

25 June 1925. Flushed 2 birds out of the hole in the Blue Oak.

30 June 1930. Bird in the rear '75 nest hole.

3 July Birds first seen here on 14 May, clearly serious by 24 May → Founded ~ 19 May. Note that Ron saw 2 unbanded ♂♂ here on 25 May, but there's been no indication of a 3rd bird since then.

6 July 600. Flushed 2 birds out of the rear hole.

7 July 530. An ambush at the rear hole was laudably successful, netting an unbanded ♂ (now ♂506) and unbanded ♀ (♀507). Both were banded, bled, and released.

29 July The area around the main trees here was burned rather badly and I'm not quite sure as yet how much of their storage area was lost. When we went up this morning the Blue Oak was still standing even though it was quite charred and its ultimate long-term prospects were questionable. The rear Valley Oak certainly is still standing but most of the holes in it were in small branches fairly low to the ground whose fates I didn't assess but certainly may well have been casualties. If so this group may be in trouble, but since I hardly ever understood how they made it in the first place even before the fire perhaps they'll manage.

# Melanerpes formicivorus

## Lower Arnold 2 — Hastings Reservation

2 August — Nobody seen in this area in passing.

4 August — 955. 2 birds together in the Blue Oak: ① ♂ M/LB #506 and a ♀.

16 September — ~~0905~~. 1005. Sitting together in the Valley Oak perch tree here were ① ♀ Red/M #507 (seen well) and what appeared to be an unbanded ♂ (seen only fairly). At least this group would appear to still exist in some form or other.

Purge: ♂506. Last seen 4 August by me, apparently gone by 24 Aug → Disappeared about 14 Aug ± 1 wk.

Add: ♂ ub. Here (by) ~~[illegible]~~ 30 Aug → Moved here as Adult 30 August.

5 October — 1550. 1 bird seen sitting up in the perch tree, but no sign of any stores here.

15 October — 1720. No sign of any birds ~~or stores~~ here ~~; it looks as though this group is different (sight!)~~ in passing, but there are some stores in the Blue Oak granary.

10 November — 1215. Counted stores: Outer Blue Oak: 135 (counted). Most acorns here are in the bark; I estimate 200 total.

Inner VO: 22

Total: 222 (est.)

No birds seen in the area, but there were bird(s) here earlier in the morning.

11 November — 1115. 2 birds in the granary here.

1220. ? Red/M #507 in the Valley Oak at the top of Arnold field.

28 December — 1230. At least 5 birds were sitting in the 2 outer trees here as I approached, leading me to suspect that the Black Oak birds may have taken over here (none were identified). In any case, there are still at least on the order of 200 stores here (I only saw 3 in the

# Melanerpes formicivorus

Lower Arnold 2 Hastings Reservation

(28 December) inner Valley Oak). I took a sample of 25 from the crevices of the out tree and replaced them with some of my own.

# Melanerpes formicivorus

Bianca — Hastings Reservation

2 January — Without a ladder I was only able to get a sample of 10 acorns; if it doesn't rain I should return and get some more.

3 January — Returned and took another 15 acorns, again replacing them with others.

6 February — Bianca is out of stores. I did flush 2 birds from the area, however, so the group is apparently still intact for now, at least.

9 March — 1145. Three birds were here in the general storage area.

10 March — 915. Watching. It's hard to tell at the moment whether it's about to clear up or fog in, however. Two birds were flushed when I arrived, though.

1015. Nothing. Just moved to better light.

1030. Run out by ants.

11 March — 1615. Watching.

1635. ♂ub up in trees between here and Blk Oak. Doesn't look settled.

13 March — I think that a corollary of ♂321 and ♂426 moving here on or about 12 November is likely to be the disappearance of the other 3 ♂♂ who used to be here for whatever reasons:

Purge: ♂214. Last seen 21 September 1978; ♂412 and ♂477, both caught on 28 September, all not seen on 10 December when 2 new ♂♂ from Black Oak were here

→ Disappeared about 11 November 1979 ± 1 month

23 March — Flushed one bird on arrival. Now (1410), one ♂ is in sap tree in forest towards Black Oak; a Nuttall's ♀ is in the tree ~~but~~ checking out the holes but the ♂ is worried about me, not her.

1415. Flushed. All I saw was ♂M, [321?].

## Melanerpes formicivorus

Bianca — Hastings Reservation

(23 March) 1430. Noone's returned here yet but this is probably the place to watch.

24 March 1615. Ron watching here.

19 April The 2 Black Oak ♂♂ who had moved to here (?) seen back at Black Oak. See Black Oak notes.

1140-1210. No sign of life over here.

22 April 1135. Nobody seen here in passing. I also checked the holes and found nothing.

24 April 1450. Watching. Is anybody here? Or has this group bit the dust?

1530. No sign of anyone here. Could be the end for Bianca, at least for the time being.

25 April 1110. Several birds on the upper edge of the territory here, apparently Black Oak birds (one, ♂102, identified).

28 April Nobody seen here in passing, though the Black Oak birds are all over in the upper side of the forest here still. I also checked holes but found nothing.

29 April 1840. No sign of any roosting birds here on this foggy evening.

Purge: ♀141, ♂321, ♂426. All here on 10 December 1978, this group ran out of stories about the end of January 1979. However, 3 birds were seen here on 9 March and 2 flushed on 10 March. All apparently gone (♂321, ♂426 to Black Oak; ♀141??) by 19 April. → Abandoned about 30 March ± 2 weeks

This territory is presently unattended.

6 May 1235. A ♂, probably banded, here. Flushed from the tree on the knoll by LA2 it flew to the Black Oak nest tree; sat; then flew off.

# Melanerpes formicivorus

Blanca — Hastings Reservation

12 May 745. Birds! At least 2 birds here (1♀) in granary area; several Garricks; some wakas over on the knoll. Could be a recolonization.

755. ≥4 birds here: best I can tell 3 are ♀♀, all unbanded and not all happy with each other (some chasing, etc. among them); the ♂ is banded, something like ♂ LP/DB-LP light/M? ; ♂ L.Pink/ ; ♂ LPink/M (see below)

800 More Garricks, Drumming by someone. It looks as though one of the ♀♀ is doing most of the chasing (of the other ♀♀). Not only the other ♀♀ are Garricking, however - she gave 2 good ones while sitting atop the Black Oak nest tree with the banded ♂ ~10' away and below her.

810. There never seem to be more than 3 birds (2♀♀ and 1♂) centrally, but there is at least one additional peripheral bird displaying out of sight somewhere regularly.

813. The ♂ is almost certainly ♂ WH/DB-WH WH/M #126 from A3, who has previously tried LA2 and LA2 and is now attempting to make a go of it here.

815. Seen poorly but nonetheless reasonably: ♂ DB/M #123, the 2nd of the fearless A3 birds. (Seen slightly better at 820).

820. Leaving. Looks good for this territory at least. And at least the ♂♂ will be banded.

14 May 835. Watching. All quiet at the moment.

840. ①♀ #46 flew from Blue Oaks to Black Oak nest tree. At least one ♂ here also. All fairly quiet, however. Possibly only 2 birds here.

850. Somebody is still here, at least. Leaving for now.

# Melanerpes formicivorus

Bianca — Hastings Reservation

17 May 1100. I didn't see anyone here during the 10 minutes I sat around, but I did hear several birds (3?) call over on the knoll area at one point.

24 May 1000. Some activity over this way. Now that I'm here, things are quiet, but there is a ♀ in the Black Oak nest tree.

(2)♂ WN-DB-WN #126 just flew up to the Blk Oak.

1010. Looks good for this group as well. Going to check holes.

2 June 1725. Noone seen here in passing or in any of the holes.

7 June 1010. " " " " " " " " " " "

11 June 1535. " " " " " " " " " " "

18 June 1000. I walked all over here, finding no sign of life except at the end when one bird, a ♂, flushed from up by the old corral and flew over to the field in between the corral and A1. Unfortunately I have no idea whether he was a Bianca bird or what.

25 June 1930. Flushed 2 ♂♂ (①♂ DB/Light #123}; the 2nd banded also) from the hole in the "new" area. Before I do anything rash here it might be worth checking for a nest.

3 July Add: ♂123 ♂126. Here on 12 May with a ♀ and acting new and interested ⇒ ~~Moved here~~ Founded ~12 May (see also A3 notes)

~~There is most likely~~

♀unbanded. Also apparently ~~moved here~~ founded ~12 May. Needs to be seen again, however!

7 July 1930. Bird(s) in the hole in the "new" area again.

15 July 600. Successfully ambushed the hole in the "new" area, catching ♂123 and ♂126, as expected. Otherwise, there was no ♀ in the hole nor any indication that another bird is present on the territory

## Melanerpes formicivorus

Bianca Hastings Reservation

(15 July) here. Thus, for the moment I'm going to delete the unbanded ♀ entirely. Apparently whatever ♀♀ were interested in the area earlier did not stick around.

29 July The fire was stopped right at the edge of the Arnold Field where the old corral fenceline was and thus this territory was unaffected.

2 August I heard birds down here while up by LA2 inspecting the burn.

4 August 935. 3(!) birds right together in the tall perch tree which sticks up behind the nest area. All 3 moved and flew behind the knoll; I then flew over my head going toward the forest area down by Jimmy's fenceline. I'm not convinced that these are in fact the birds who "belong" here.

7 August 915. 2 and maybe 3 birds flushed from the central area: ① ♂ DB/·Or· #123 and ② a ♀(!).

920. Watching. Calls from the knoll sound like 3 birds.

1020. Leaving. There are definitely birds here, but they are not returning to their Black Oak at the moment.

3 September 1030. A fair amount of activity here. At least 3 birds; apparently some chasing. I don't know what's up; possibly the Black Oak birds are still in this vicinity.

16 September 740. All quiet here at the moment. Just a few minutes ago the Black Oak birds were apparently flying over here.

745. Now several birds in the far knoll up by LA2 - seem to have converged here from all possible directions. A ♂ here just Garnicked.

5 October 1600. Passed by here but noted no birds nor stores. This group may at last have expired.

# Melanerpes formicivorus

Bianca — Hastings Reservation

15 October 1720. No sign of any birds or stores here in passing; the group may in fact really be defunct for the present (sigh.).

16 October Purge: ♂♂123, 126. Former last seen (by Ron) at Lower A2 on 22 August. About this same time Ron reported constant occupancy of this area by the Black Oak birds. Last indication that these birds were securely at Bianca was 7 August. ∴ Abandoned about 22 August ± 1 week.

8 November 1130. There are at least 3 birds over here. Surely these are the Black Oak birds.

There are no stores here at all. I was unsuccessful at seeing any of the birds here, but they obviously come from elsewhere.

10 November 930. Watching at the knoll up towards LA2.

1030. ① ♂ Red M/Blk-Red #497 - the juvenile from last spring. Now he and several others are hawking in the woods here.

1035. ② ♂ DBlue/Or(?) #426(?) Not seen well.

1045. ③ ♀ Red-LG/M #320.

1100. ④ ♂ Or/DB-Yel(n) #321.

1105. ⑤ ♀ DB/Red #427. Birds are moving freely around in the entire knoll. Also in the Valley Oak granary here.

1200. Leaving. Four birds (all Bianca) for sure; possibly a 5th. The ~~B~~ Black Oak birds are clearly at home in this entire area. I also checked the Valley Oak granary on the knoll, which actually has 9 acorns stored in it.

28 December 1230. No birds or stores noted here this time around.